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ORIGINAL LECTURES.

REMOVAL OF AN ANOMALOUS ABDOMINAL TUMOR.

A Clinical Lecture delivered at the University Hospital.

BY WILLIAM GOODELL, M.D.,
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GENTLEMEN: The woman whom I show you this morning is thirty-four years old. She has a very large abdominal tumor, complicated with exhausting menorrhagia, but she does not suffer as much as her appearance and the size of the tumor would indicate. The tumor has been present for seventeen years; but it has increased much more rapidly and given much more trouble during the past year, so that she has now come here to see if it can be removed.

Before she was etherized, I explained to her that I could not be able fully to make up my mind as to what I should finally do, until I had made an exploratory incision. She was perfectly willing for me to do exactly as I thought best, so I have had her etherized, and will make an incision to see whether the tumor, after being tapped, can be removed. If it cannot, this exploratory incision will be closed, and the woman will have run comparatively little danger.

Upon making a digital examination some days ago, I found the womb wholly free from any attachments to the tumor, yet the cyst has adhesions which keep it firmly fixed. I now divide the abdominal wall, and upon coming to the tumor it looks like a malignant ovarian cyst, but I shall not stop to decide this point; besides, the microscope will be necessary before a final diagnosis can be made. This large piece of omentum which lies so formidably before me, presents a double adhesion to the tumor and to the abdominal wall, and, as it is important to cause as little bleeding as possible, I tie the whole piece of this omentum *en masse*, preparatory to tapping the cyst. While I am thus engaged—for it will take a few minutes—let me mention that the woman upon whom I performed a very difficult oöphorectomy before you last Wednesday is doing exceedingly well. She has not had a single bad symptom.

This tumor looks malignant, wonderfully malignant, and yet it may not be so, for appearances in abdominal tumors are often very deceptive. I do not wish to make this incision any larger than I can possibly help, so I diminish the size of the tumor by drawing off its contents. The contents, however, are not fluid, but a dark-red or grayish-black, pultaceous mass. This appearance does not lessen my fears regarding the malignancy of the cyst. In the wound I shall have to leave a drainage-tube, on account of the character of the tumor and of its adhesions, which are mostly omental and parietal. The tumor cannot be lessened in size, so I shall have to enlarge the incision; and, having now done this, I lift the tumor out before you. Its walls are very thick, the tumor seeming almost solid, and its weight, without the little fluid that escaped, is probably about fifteen pounds. I have to tie a number of omental veins, which run like earth-worms into the tumor. Some bunches of them I tie *en masse*, and others singly.

This is the first time in my experience that a tumor like this one has lasted so long as seventeen years. It does not look like an ovarian tumor. I transfix the pedicle, tie it with the "Staffordshire knot," and remove the tumor. It is *not* ovarian, for here are both ovaries and tubes, perfectly healthy in every respect, and the pedicle of our tumor comes off from the broad ligament close to the left ovary. This is the most remarkable tumor that I have ever met with, and is, I fear, a malignant dermoid. But I have never before met with a dermoid cyst in the pelvic cavity which was not ovarian.

I now go to work to cleanse the abdominal cavity, and find that there is some vessel bleeding. As it comes from the torn surface of the omentum, I do not hesitate to tie the whole, and to cut off a large piece of it.

I now remove the sponges, cleanse them, and put them back. I again take a look at the ovaries; and find that they are perfectly healthy, which makes matters look better than if they also had been diseased. I come across some other pieces of omentum, and I do not hesitate to remove them if they are bleeding, or tattered and torn. This looks a little rough, but I am confident that it is the right thing to do. Moreover, you may ask, in connection with this: "Does it not increase the risk of sepsis or peritonitis to use so many ligatures?" I answer, Yes; they must do so to some extent, but less than the bleeding for which they were used. I have put in as many as sixty, apparently without any evil results, so that I do not think that they add much to the danger. There has been comparatively very little loss of blood here, except what was unavoidable from the congested state of the divided parts. I should have expected more hæmorrhage and menorrhagia from such a large and congested womb, though sometimes it happens that such is not the case. When I first examined this patient, had it not been for my previous experience in these matters, I should have concluded that it was a malignant tumor of the left ovary; but, as it had already lasted seventeen years, I was more inclined to believe it to be a pedunculated fibroid of the uterus.

Before putting in the sutures, I shall excise the navel; both because its tissue is thin and forms a poor cicatrix, and because it is a favorable seat for septic germs. When these sutures are *in situ*, I thoroughly irrigate the peritoneal cavity with warm water, and with my hands I paddle about the bowels, and wash out this cavity and Douglas's pouch, pouring in jugful after jugful until the water comes back clean. I know that this looks to you rough, and I would not have dared do it ten years ago.

But experience has taught me, and others, that it is not what goes into the peritoneal cavity, but what is left there to disintegrate and to cause sepsis, that is really dangerous.

While I am engaged in this irrigation, I shall take the opportunity of telling you that all the patients upon whom I have so far operated before you this session, have done well, except the woman who had, as I then told you, syphilitic ozæna. Her ovaries were removed, and she died in three days, from heart failure. I attribute her death to the fact that she had been an opium-eater, which, unfortunately, I did not know until after her death, and, possibly, the too sudden withdrawal of so powerful a customary stimulant from her at the time of such a dangerous condition, was too great a tax upon the system.

The instruments and sponges being now counted, the sutures are tied, and the wound closed, after being sure that all the water that I have poured in has come out again.

This corkscrew among my instruments—a suspicious object for a gynecological teacher to have—needs some explanation. I brought it with me to-day, thinking that I might have to use it in taking out the supposed fibroid tumor. By screwing it into a solid fibroid, we get an excellent hold which takes no room.

As my hour is up, I shall remove the woman to my private room, and apply the usual antiseptic dressings.

[At his Clinic two weeks later, Dr. Goodell informed the class that this woman's temperature had not been over 100° since the operation, and that she was then doing well in every respect.]

ORIGINAL ARTICLES.

THE CAUSE OF DEATH FROM CHLOROFORM.

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AND
H. A. HARE, M.D.,
DEMONSTRATOR OF THERAPEUTICS.

IN the *Indian Medical Gazette* for February, 1889, it is stated that a Commission composed of Dr. Hehir, Mr. Kelly, and Mr. Chamarette, assisted by the students at the Hyderabad Medical School, have made a series of experiments upon 128 full-grown pariah dogs, to ascertain the method in which chloroform causes death. It is further affirmed that the investigators varied the doses and the method of administering the chloroform in every way, and tested the value of artificial respiration by reviving the dogs over and over again, after breathing had stopped, and while the heart was still beating, and that they found that no matter in what way the næsthetic was given the heart became dangerously affected only when the breathing had ceased.

We have not had the opportunity of seeing the original report of this Commission, but learn from current medical journals that under the auspices of the Nizam of Hyderabad, Dr. Lauder Brunton, of London, has gone to investigate the matter. It is also stated in the *Lancet* that cablegrams have been received from Dr. Brunton affirming that the experiments of the Commission have been verified and their conclusions justified, and that as many as 450 animals have been used in the study of the question.

The surprising statements which have been made in the Indian journals and in the London *Lancet*, with the practical deductions which *apparently* follow upon them, seem to us of so great import as to demand the putting upon record of our own experience.

We believe that physiologists in general hold the opinion that when chloroform is given to the lower animals in a very dilute form, and gradually pushed, it causes by its action upon the nerve centres a paralytic relaxation of the muscles and at last death by paralysis of the respiratory centres; but that when it is administered freely in concentrated vapor by inhalation, or when it is injected in sufficient amount into the jugular vein, it kills by a paralytic arrest of the heart, the viscus stopping suddenly in its beat, and being found after death relaxed and incapable of reacting to stimuli. It has generally been believed that the danger from cardiac arrest by chloroform increases in direct ratio with the rapidity of administration; but that in animals, as well as in man, cardiac arrest sometimes occurs almost at once on the inhalation of the anæsthetic in small amount; or, in other words, that comparatively small amounts of chloroform have at times caused death by syncope, through direct action upon the heart. This we believe has been the teaching of all the instructors, both clinical and physiological, in the Medical Department of the University of Pennsylvania, and we desire to reiterate, as the result of our past experiences, that chloroform does, in the ordinary American dog, sometimes kill by paralyzing the heart, such paralysis accompanying or preceding, according to our past experiments, the arrest of the respiration.

It has been the custom of one of the authors of this paper, in his lectures before the University class, to demonstrate by means of the respiratory tambour, the mercurial manometer, and the kymographion, a continuation of respiratory movements after cardiac arrest through chloroform. Further than this, we have at various times in the Laboratory of Experimental Therapeutics, at the University, taken tracings proving the same facts.

Moreover, on experimenting with other drugs in the laboratory, the point at issue has been determined, because we almost invariably kill the dog which has escaped the drug being studied, with chloroform, whilst its artery is still attached to the kymographion, and the needle is still registering the play of the blood. We have sometimes given the drug intravenously, but in many cases we have administered it by inhalation of the concentrated vapor, and we have often noticed that death has been produced by primary cardiac arrest.

When chloroform is injected into the jugular vein it is carried first in its concentrated form to the right side of the heart, and when it is absorbed through the lungs it is carried directly to the left side of the heart. In either method of administration the anæsthetic reaches the heart in a concentrated form before it is scattered in the circulation and gets to the respiratory centres. This may have connection with the frequent early occurrence of cardiac arrest during chloroformization in the human subject, but we desire especially to emphasize the point, that in either method of administration the heart is first reached, and that in our experience there is no essential difference in the action of chloroform, whether it is given by inhalation or whether it is injected into the jugular vein.

As we use between us, in the laboratory of the University, many dogs yearly, a very large proportion of which are finally killed by chloroform, we may be excused for our past positive assertions that chloroform is a cardiac paralyzant and does kill dogs by a direct action upon the heart or its contained ganglia; especially since we have been strengthened in our opinion by the fact that Dr. Reichert, Professor of Physiology in the University, has reached results confirming our own, and has frequently demonstrated the same to the University classes.

The statements that have been recently made in the Indian journals and in the London *Lancet*, have led us to reëxamine the subject and to make a series of experiments upon it with the greatest care. We have, also, varied and extended these experiments in order to determine whether chloroform paralyzes the heart by a direct influence or by an indirect action through the vagus.

A number of our experiments have been made by injecting the chloroform into the jugular vein; in others it has been administered by the respiratory tract. In all cases accurate tracings have been made by means of the kymographion and the respiratory tambour.

The theory has from time to time found advocates that the vapors of chloroform may, by irritating the larynx and adjacent parts, cause arrest of the heart through a reflex inhibition. To test the possibility of this we have made a number of experiments. When the tracheal canula is tied tightly into the trachea some distance below the larynx, it is evident that the latter organ is isolated from the general respiratory tract, and that chloroform injected into it will exert only a local influence. In all the experiments which we have made in the way just indicated, the injection has been followed by an immediate and very pronounced primary fall of the pressure, followed, after a very brief interval, by a rise which usually reaches decidedly above the norm. As an example of one of these experiments, we give the following tracing.[1] (See page 192, Tracing 1.)

The primary fall of arterial pressure, which has just been spoken of, can scarcely be produced except by reflex inhibition of the heart or of the vasomotor centres, whilst the secondary rise is probably the result of a reflex vaso-motor spasm. In order to throw light upon this question, we have made experiments by injecting chloroform into the larynx after division of the pneumogastric nerves, the trachea being ligated so as to prevent the entrance of the anæsthetic into the lungs. (See page 192, Tracing 2.)

In making practical application of the experiments just discussed, it must be noted that in no case have we succeeded in completely arresting the heart's action by injecting chloroform into the larynx, and as the chloroform was injected in liquid form, it is plain that the irritation was more intense than could be produced by the mere vapors of the anæsthetic however concentrated; therefore, while it must be considered that it is possible for a reflex inhibitory arrest of the heart to occur during the inhalation, such an accident is extremely improbable, and we consider it practically certain that a heart so arrested would, a few seconds later escaping from the inhibitory control, recommence its beat. It certainly has never been proven that chloroform can cause in the human subject permanent reflex inhibitory cardiac arrest, and as our experiments upon the dog have failed to cause such arrest, we consider it very improbable that inhibitory arrest is ever produced in man by chloroform.

The second series of our experiments were made to determine the way in which large amounts of chloroform, either thrown into the jugular vein or absorbed into the pulmonic capillaries, cause death.

We have found that it is possible for the heart and respiration to be practically simultaneously paralyzed by the anæsthetic. (See page 193, Tracing 3)

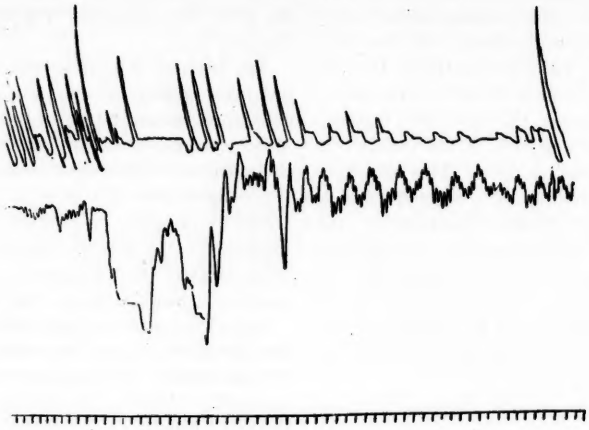
On the other hand, the heart may be arrested during chloroformization, and the respiration continue, as is shown in the accompanying tracings. (See page 193, Tracing 4.)

We desire to call attention to the fact, that of the two tracings here inserted, one (Tracing No. 4) was made by injecting the chloroform into the jugular vein, whilst the other (Tracing No. 5) was obtained by the inhalation of chloroform. In the second experiment (inhalation) *breathing continued two minutes after the heart had ceased to act.* (See page 193, Tracing 5.)

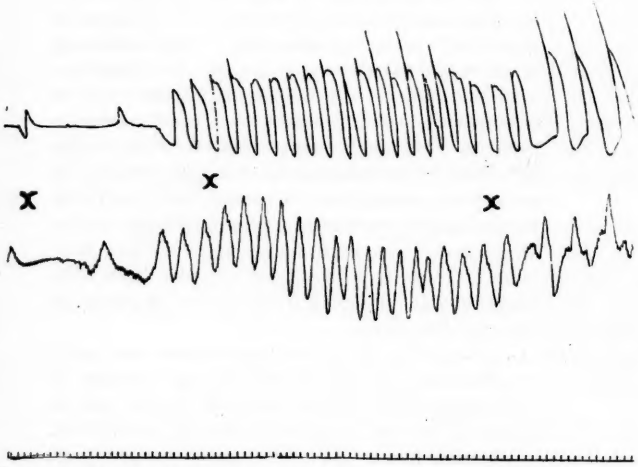
The next series of experiments were made with

[1] The upper tracing represents the respirations as registered by a tambour; the second one the pulse waves, and the third the abscissa line and second marks.

TRACING NO. 1.

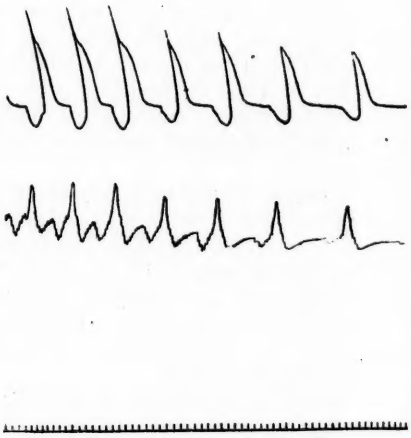


TRACING NO. 2.



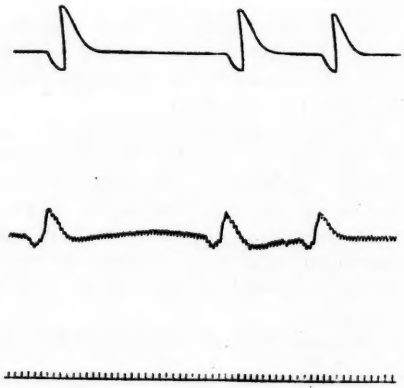
Vagi cut at first x mark; chloroform injected into larynx from x second to third x marks.

NO. 2a.



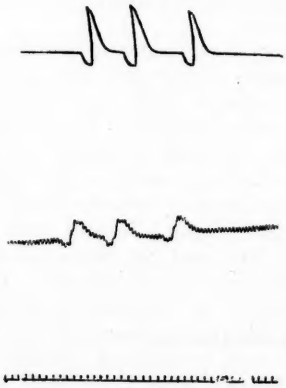
Same continued; no break in time.

NO. 2b.



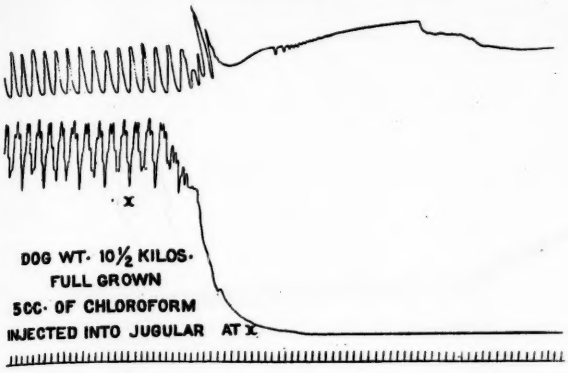
1 minute later.

NO. 2c.

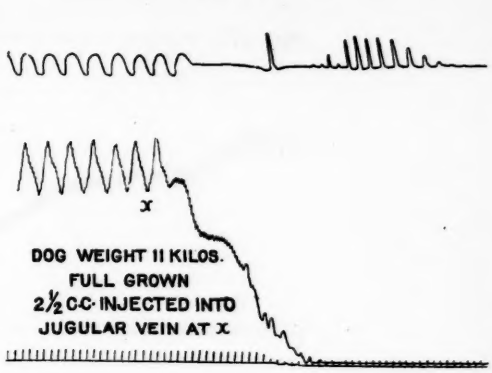


30 seconds later.

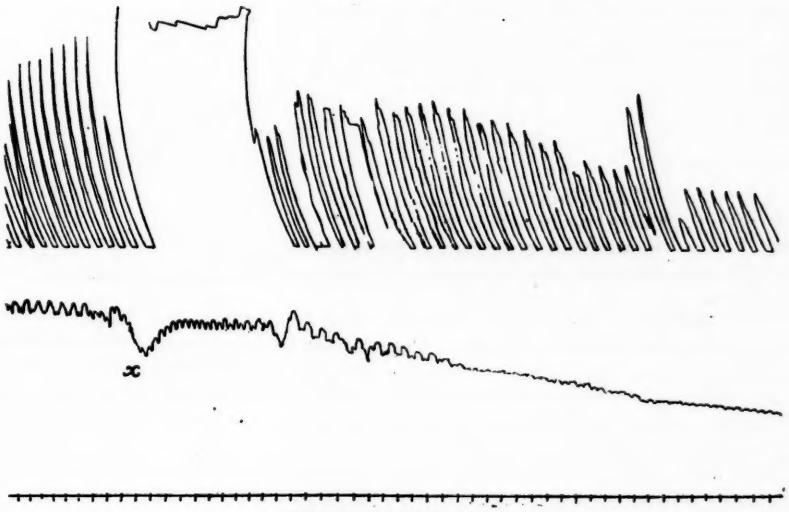
TRACING No. 3.



TRACING No. 4.

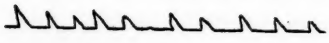


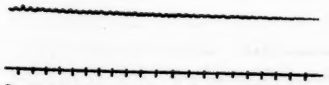
TRACING No. 5.



Chloroform inhaled at x.

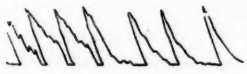
No. 5*a*.

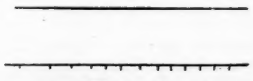




Same tracing continued 30 seconds later.

No. 5*b*.



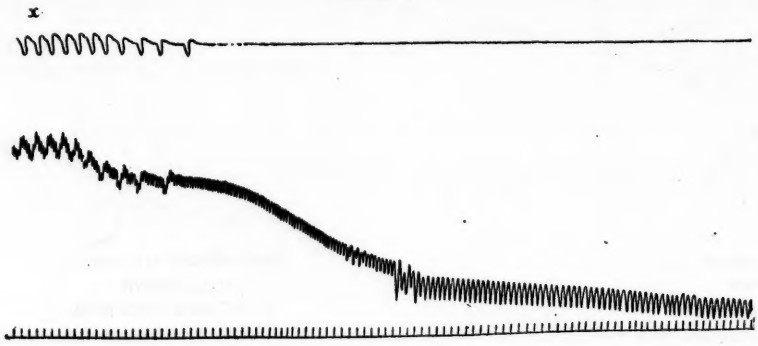


Same continued 1 minute later.

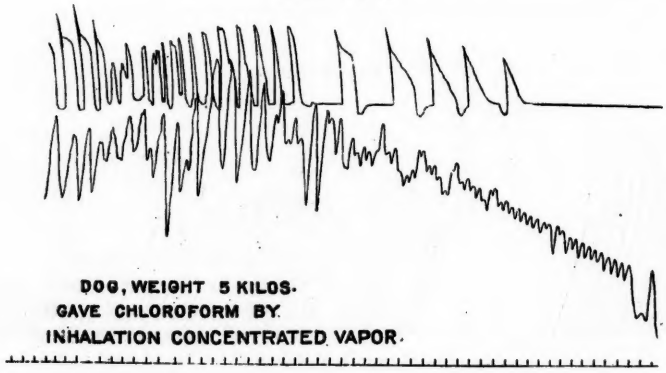
No. 5*c*.

Same continued 30 seconds later.

TRACING NO. 6.

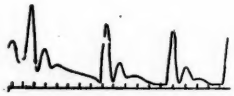


TRACING NO. 7.

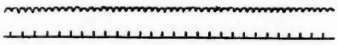


No. 7*a*.

No. 7*b*.

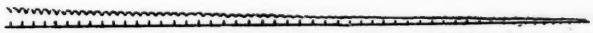


Same tracing continued, no break in time.



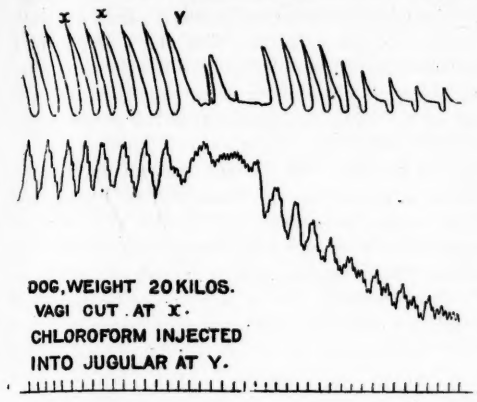
Same tracing continued 30 seconds later.

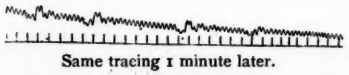
No. 7*c*.



Same tracing continued 1 minute and 30 seconds later.

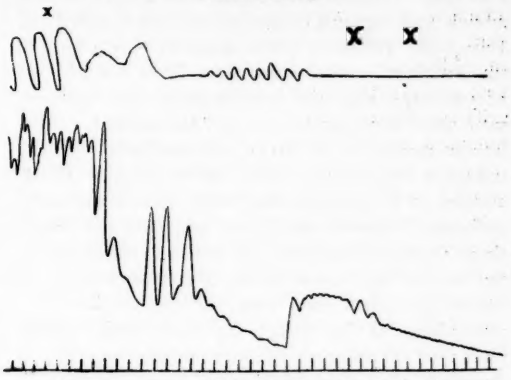
TRACING NO. 8.





Same tracing 1 minute later.

TRACING NO. 9.



Vagi cut at x x, but did not start heart beating again.

small doses of chloroform. In a number of these cases the respiration ceased long before the heart's action, as is shown in the appended tracings, in which the heart continued to beat two minutes after the cessation of respiration. (See page 194, Tracings 6 and 7.)

The final series of experiments we made to determine whether chloroform arrests the heart by indirectly affecting the vagus or by a direct action upon it. In one experiment (Tracing No. 8) the vagi were cut before, in the other (Tracing No. 9) after the exhibition of the chloroform. It is evident that the vagal section has little or no influence upon the cardiac action of chloroform, which, therefore, acts directly upon the heart and vaso-motor system. (See Tracings 8 and 9.)

The experiments which we have given show that chloroform acts as a powerful depressant poison upon both respiration and circulation, that sometimes the influence is most felt at the heart, and death results from cardiac arrest; that in other cases the drug paralyzes primarily the respiratory centres, whilst in other instances it seems to act with equal force upon both medulla and heart. So far as practical medicine is concerned, it makes little difference whether the heart stops just before or just after respiration; so that those cases, in which cardiac and respiratory arrest are almost simultaneous, are, for the purposes of the clinician, the same as those in which heart-arrest precedes respiratory paralysis. Finally, the general results of our new experiments also coincide with our previous experience in the laboratory, and with what we believe to be the general belief of physiologists—that cardiac arrest is specially prone to occur when chloroform is administered rapidly and in a concentrated form.

The present series of experiments which we have made with chloroform are so concordant in their results with those previously obtained by other experimenters and by ourselves, that it seems to us that their results cannot be gainsaid. Therefore if a final statement should be made by Dr. Lauder Brunton and his India coadjutors that the dogs of India are killed by chloroform solely by the action upon the respiratory centre, the conclusion must be drawn that the pariah dogs of India are affected by chloroform differently from those of Europe and America. This to us seems the best explanation of the curious results obtained in India. It is possible that the climatic influence of that country may make the respiratory centres abnormally sensitive to chloroform. That the thought of the different constitutions of animals in different climates is not absurd, is shown by the fact that, some years ago—after one of us had stated before the Physiological Section of the International Medical Congress, at London, that if certain asserted results were obtained upon European dogs, said dogs must differ from those of America, and had been met with a smile of incredulity—Dr. Brown-Séquard rose and stated that he had experimented upon hundreds of dogs on both continents, and that there was a distinct difference between the animals, the vascular system of the European dogs being much more developed and operations upon them being, therefore, much more bloody than was the case with the Amer-

ican dog. Hashish causes the East Indian to run amuck and commit crime but fails so to affect the European. Whatever explanation we may accept of the different results which have been reached, we very strongly urge the consideration that these results show that the action of chloroform upon the human system is not to be estimated solely by any influence which it may have on the dogs of India. Indeed, it is possible that there may be the same difference between man in hot and cold climates as there appears to be in dogs in hot and cold climates; but we do not know of any statistics which will throw light upon such a supposition. A fact to be remembered is that though 450 pariah dogs in India have died of respiratory failure, an equal number in America have died of cardiac arrest, whilst the records of clinical medicine show that death in the human being from chloroform usually takes place either by primary arrest of the heart, or by a simultaneous arrest of the heart and the respiration, while in etherization the respiration usually ceases distinctly before the heart's beat. We do not propose in the present paper to reiterate the statistics which may be found in the text-books and recent treatises on anæsthetics, but we do desire to say emphatically that we believe the roll of deaths from chloroform would be very much larger if all the cases were reported, and that the present inequality between the anæsthetics, ether and chloroform, would be much more pronounced if an absolutely clear record could be obtained. One of us has seen, in a Philadelphia hospital, death produced by chloroform through cardiac arrest. The other has personal cognizance of two cases; but none of these instances have been reported. The surgeon who uses ether knows that he will receive no blame if a death occurs from it, and also that he has a rare case to put on record, which will give his own name a permanent place in anæsthetic literature, and consequently he naturally hastens to publish his unfortunate result; whereas the surgeon who uses chloroform knows that if death occurs from the anæsthetic, a very large proportion of the profession will condemn him either in public or secret for the use of this drug. Moreover, deaths from chloroform are only too common, so that the surgeon has nothing to gain and much to lose by publication of a chloroform death, and if possessed of the average human nature, holds his peace.

After the present paper had been sent for publication, the issue of the London *Lancet* for January 18, 1890, came to hand, and we have carefully read the report of the Hyderabad Commission. The great respect and friendship which we have for some of the members of this commission—make us loath to differ from them, but the issue between us is not simply a scientific matter, which would allow of silence, but is of such immense practical importance, involving, as it does, human life, that we feel it a duty to speak.

In the first place, we fear that the Commission's statement that their object is "to *test* the suitability and safety of chloroform as an anæsthetic," will mislead the minds of readers as to the proper scope of experiments upon animals in regard to therapeutic questions. We believe that no one will accuse us of attempting to diminish the importance of such experimentation, but we insist that the only proper objects of such experiments are to lead the way to clinical studies, and to explain clinical facts. A well-established clinical fact cannot be disproved by any amount of experiments upon animals.

We have given elaterium to dogs until it has caused death, but it has not purged. Suppose that every dog in India had had administered to it elaterium, without the production of purgation, would that prove that elaterium does not purge man? We believe that it is proven by clinical experience that, occasionally, in man chloroform does suddenly, without warning, arrest the heart's action. It seems to us scarcely possible that such conclusions as clinical reports, appear to be too definite and positive upon this point to be contradicted by experimental studies. But we believe that in verity the results of experiments with chloroform upon the lower animals are in accord with those obtained in human medicine.

In any discussion with wide differences of opinion, it is a matter of importance to determine points of agreement as well as of disagreement, and the probability of the correctness of the facts agreed upon is very great. We notice, therefore, with pleasure, that the Commission state (paragraph 18, p. 155): "The theory which has hitherto been accepted is that the danger in chloroform administration consists in the slowing or stoppage of the heart by vagus inhibition. This is now shown to be absolutely incorrect." This is in accordance with our own experimental results and conclusions, and whilst we deprecate the extreme positiveness of assertion, we think it highly improbable that chloroform ever kills man by a reflex inhibition of the heart.

In paragraph 20, p. 155, the Commission further states:

"In experiment ninety-two, repeated injections of twenty minims of chloroform were made into the jugular vein, and their effect was not to paralyze the heart, but to produce anæsthesia and a gradual fall of blood pressure, exactly as if the chloroform had been inhaled." This statement agrees with what we have already asserted in this paper. Chloroform possesses its peculiar properties by virtue of its inherent nature, and the method of administration does not altogether dominate the effects of the drug, so that conclusions can be predicted upon experiments made by injection into the jugular vein as

well as upon those in which the chloroform is administered by inhalation. The agreement of the Commission with ourselves seems, therefore, to cut off any objections to our method of experimentation, especially since in every instance we have tracings obtained by inhalation as well as by injection.

In any discussion it is very important that the essential point be closely adhered to, and not lost sight of in side issues. In the report of the Hyderabad Commission there is a great deal that is novel and of much scientific interest concerning the effects of strangling, of suffocation, of vagi-irritation, etc., upon a chloroformized animal. These are in themselves very valuable, but they are liable to obscure the one main issue—an issue which, fortunately, is tersely expressed by the Hyderabad Commission in a single line, when it says: "and, however concentrated the chloroform may be, it never causes sudden death from stoppage of the heart."

In considering this main issue, we desire, first, to call attention to the fact that the evidence of the Commission is negative, whilst our evidence is positive, and we believe it is a general law of evidence that negative testimony cannot stand against positive when the latter is trustworthy. The Commission in substance assert: We have made a large number of experiments upon Indian animals, without ever having seen the heart arrested by chloroform before the respiration—therefore, chloroform never causes death by syncope; or, to put it in another way, we have not seen a certain phenomenon, therefore that phenomenon never occurred. On the other hand, we state that we have seen this phenomenon repeatedly, and we offer in proof of our statement, not merely our own assertions, but tracings which have the same relation to physiology that the photograph has to the original transactions of life.

Further, our results in conclusion are in accord with those obtained by other observers since Glover, in 1842, first pointed out that the vapor of chloroform, when locally applied to the exposed heart, stopped its movements. The English Chloroform Commission—Go-selin, Anstie, Richardson, Ringer, and Vulpian—are among the names from whom the Hyderabad Commission appears to differ, and with whom we agree more or less closely.

Much as we differ from the Hyderabad Commission as to the conclusions which should be drawn from their experiments taken in conjunction with those of other investigators, we would dissent much more strongly from the language used by the *Lancet* itself, in its editorial of January 18th, where it says: "The practical outcome of the research would appear to be that deaths from chloroform are not inevitable. They are, therefore, preventible, and *by due care* in its administration *they may be with certainty avoided.*"

We desire most emphatically to protest against any such language being considered as justified by the work of the India Commission. If, with due care in administering chloroform, accidents may with certainty be avoided, they are, when they do occur, the result of ignorance or carelessness, and the coroner's jury, in a given case, could scarcely, under the rulings of the *Lancet*, fail to bring an accusation of manslaughter against the surgeon. We cannot help wondering if the editor of the *Lancet* appreciated the force of his own words.

According to the latest edition of Dr. Lawrence Turnbull's work on *Anæsthesia*, 375 deaths from chloroform have been recorded. If the unreported cases are borne in mind, it must be considered that at least 500 surgeons have had in their practice fatal accidents during chloroform anæsthesia; the actual number of those who have met with fatal results is probably far greater, and among these surgeons we note these names:

Professors Billroth, Dumreicher, and Jaeger, of Vienna; Sir J. Y. Simpson, Sir George H. B. McLeod, Mr. J. Farrant Fry, and Mr. Francis W. Clark, of England and Scotland; Drs. Hunter McGuire, J. H. Wellford, and Dr. Chancellor, of Virginia; Drs. W. A. Hammond, A. J. Parsons; and Professors W. W. Dawson, Kinloch, and Mussey.

Does the *Lancet* mean to charge that these accidents could have been avoided? That these men have been practically guilty of taking life through carelessness?

A NOTE ON THE EARLY DIAGNOSIS OF PERITONEAL ADHESIONS IN ABSCESS OF THE LIVER.

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THE common opinion of the profession to-day is, that abscess in the liver should be evacuated as early as possible in its progress. Before the invention of the aspirator, the time fixed for surgical interference was that at which it was supposed firm inflammatory adhesion had taken place between the liver and mural peritoneum. The accepted indications of the presence of this adhesion were then, as now, subcutaneous œdema and swelling, fluctuation, and, later, inflammation of the skin. Since the introduction of the aspirator, it has become the rule to withdraw the pus with this instrument as soon as its presence has been discovered; and reports seem to show that, in a small number of cases, this early tapping has stopped suppuration and induced reparation.

Usually, however, the abscess cavity refills after aspiration, and the disease extends in one direction or another toward the surface of the liver. If it goes toward the abdominal wall, and we wait for

œdema and fluctuation, or these with redness of the skin, to appear, it may extend simultaneously in other directions, and, discharging into one of the adjacent cavities, result in long suffering or death to the patient.

Careful observation, during a number of years, of those cases of peritonitis which I had an opportunity of watching through their whole course, has convinced me that adhesion of the liver and parietal peritoneum, of sufficient firmness to prevent the flow of pus into the peritoneal sac in the evacuation of hepatic abscess through the abdominal wall, can be recognized some days before the classic indications of it appear.

Peritonitis, when due to a local cause, begins at one point at the seat of the cause, and, like inflammation in other tissues, spreads by continuity with more or less rapidity. Indeed, it probably begins in this manner in all cases; but in septic and general inflammations the disease extends so rapidly that its progress cannot be noted by the physician. But when the disease is owing to a local disorder, like abscess of one of the abdominal organs, and extends from them to the parietal peritoneum, its progress can be noted from day to day, and the more acute the symptoms the better it can be done. Accompanying the first pains of peritonitis there is tenderness on pressure over the seat of pain, usually very extreme, but perhaps over an area so small that it may be covered with the end of a finger. As the swelling of the underlying organ increases, the area of contact between it and the abdominal wall extends, and the inflammation of the parietal peritoneum, being dependent upon contact of the opposing surfaces, spreads accordingly. The portion of the peritoneum which is first inflamed becomes adherent to the opposite surface first, and as soon as the adhesion is firm enough to prevent movement and friction, the extreme pain and tenderness over its extent, be it ever so small, disappear.

If the inflammation continues and extends after a point of adhesion has been formed, the area of tenderness will move with it; and if it spreads in all directions the tender area will become ring-shaped. As the inflammation advances, the ring becomes larger, all the time preserving the excessive sensitiveness to pressure which is characteristic of inflamed peritoneum, and the central area under which adhesions have formed, and which consequently has lost its tenderness, increases in size correspondingly.

These phenomena were well exhibited in the following case of hepatic abscess:

G. M., a strong, healthy, muscular lad, sixteen years old, a moulder, complained of ill-defined pain in the pit of his stomach for three weeks, but continued at work. Then, suddenly, the pain increased so much as to compel him to go to bed. The next day I saw him, and found him in a fever, and with pain and tenderness in the epigastrium. The pain and tenderness were confined to a spot one and a half inches in diameter, of which the centre laid midway between the xiphoid cartilage and umbilicus and just to the left of the middle line. The tenderness was so intense that the least pressure beyond simple touch was unbearable, and the least movement of the body aggravated the pain most excruciatingly.

Daily examination of the abdomen revealed no change until the ninth day of his illness, and then the only change was increased resistance to pressure under the area of tenderness. By the thirteenth day the area of tenderness had increased one-half inch in diameter, and the centre was distinctly less sore to the touch than the periphery. On the fifteenth day, after a slight tympanites had disappeared, the surface over a spot two and a half to three inches in diameter appeared slightly elevated, and was firmer under pressure than the surrounding parts, and decidedly more tender on the edge than in the centre. Next day, thinking that I recognized an indistinct sense of fluctuation near the centre of the tumor, I put in an aspirator-needle slowly to a depth of two and a half inches, but failed to get pus.

On the sixteenth day the visible and palpable tumor had increased to a diameter of three and a half inches. The tumor was now again punctured with the aspirator-needle three-quarters of an inch above the seat of the previous puncture, and pus was struck at a depth of one inch. About three ounces of pus were withdrawn, and the pain and general symptoms were much ameliorated. On the eighteenth day the tumor had regained the size it had reached before the withdrawal of the three ounces of pus, the pain had returned, and the pulse and temperature risen.

I then proposed to open the abscess through the abdominal wall, but my colleague disagreed, upon the ground that as there was neither subcutaneous œdema and swelling, nor redness of the skin, there was no evidence that adhesion had taken place between the liver and the parietal peritoneum. I then related to him my observation of the beginning and spread of the pain and tenderness before he saw the case; how I had at first found both affecting a small, disk-shaped area which gradually expanded in all directions; how, as this disk grew larger, its centre became painless, and how the painless area increased with the extension of the inflammation, until the latter was represented only by a ring of tender tissues. He would not be convinced that this peculiar appearance, extension and disappearance of the pain and tenderness indicated adhesion of the liver to the abdominal wall in the painless central disk. To produce more evidence of the presence of sufficient adhesion to permit free opening through the abdominal wall, I now passed an aspirator-needle into the abscess a quarter of an inch below the puncture of the former tapping, and found pus, as before, at a depth of one inch, and then passed

the needle at a point the same distance above the old puncture with the same result.

This seemed to show, at least, that there was an abscess cavity not less than half an inch in vertical diameter, just one inch from the external surface of the abdomen, and that if there was adhesion in the middle of this line where the first tapping of pus had been made, against which there were no probabilities, it was just as likely that the adhesion extended the whole length of the cavity. It also showed that not much liver-tissue would have to be cut in making an incision into the abscess. A solution of cocaine was then injected into the upper and lower punctures, and a straight bistoury pushed one inch into the lower one and made to cut the distance of half an inch to the upper one, with very little pain to the patient. After the discharge of about seven ounces of bloody and badly smelling pus, the cavity was washed with a solution of bichloride of mercury, 1 to 4000, and a large rubber drainage-tube inserted for three inches, and covered with an antiseptic dressing. At the end of three weeks after the incision the boy was well and out of doors.

These observations may be of little interest to the consulting surgeon, who is usually called late in the course of this disease, but to the general practitioner they are of practical value, inasmuch as they, if carefully practised, enable him to fix the time when immovable adhesion between the liver and abdominal wall occurs, and hence to recognize the earliest time at which an incision can be safely made.

This method of opening an hepatic abscess before the abdominal parietes are involved possesses the disadvantage of seeming like a thrust of the knife into darkness; but if, as is presupposed, there is firm adhesion between the opposite peritoneal surfaces, it is just as simple and free from danger as the lancing of an external abscess. On the other hand, it possesses some advantages over the method of opening by dissection. It requires less skill on the part of the operator, less time, and a smaller incision; and it does not necessitate the use of ether, thus avoiding the danger of rupturing adhesions incident to the usual struggle in the early stage of etherization and the later retching and vomiting.

THE PREVENTION AND TREATMENT OF PUERPERAL FEVER.

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PUERPERAL fever is an infectious wound disease produced by living ferments; these ferments are formed outside the normal body, and are by some means carried into the body from without; hence, puerperal fever is contagious. Half a century ago this statement would have been denied by obstetricians; to-day the vast majority of opinion, based on the most thorough study of the question, accepts it as true.

From what sources are these living ferments derived? Generally from animal tissues in a condition of decomposition, rarely from decayed vegetable matter. The substances causing puerperal fever are most often brought into the body through some wounded surface at the time of labor; syphilitic disease of fœtus and mother, resulting in fœtal death and abortion and cancer, may produce ferments which may be absorbed at labor, causing puerperal fever.

Gonorrhœal poison introduced into the mother's body before labor may produce living ferments which may be absorbed through a wound produced at labor, causing puerperal fever. But in the woman who comes healthy to her labor, and has puerperal fever, the disease is the result of contagion, with which she is inoculated from without. The prevention of puerperal fever consists, then, in the prevention of syphilitic and gonorrhœal infection before labor; in destroying the poisonous products of such infections, and in shielding the healthy parturient from septic poison at and after labor.

The very practical question then arises, How shall this be done? In a case where pregnancy and syphilis exist, abortion should be prevented, if possible, by constitutional treatment. The vagina should be examined for local lesions, and all ulcerating surfaces should be treated by applications of iodine and carbolic acid (tincture of iodine, 1 part; carbolic acid, dissolved in glycerin, 4 parts). The vagina should be douched twice daily with bichloride of mercury, 1 : 3000, and one or two drachms of iodoform or powdered boric acid should be deposited within the vagina, after the douche, and allowed to remain there. When the vagina is healed, one vaginal douche of bichloride, 1 : 5000, may be taken daily until labor; the administration of constitutional remedies should be continued. When pregnancy is complicated by gonorrhœa, warm vaginal douches of bichloride of mercury 1 : 3000 may be taken until the acute stage be passed; the leucorrhœa following gonorrhœa should be persistently treated by mercurial douches 1 : 5000, or creolin 30 drops or 1 drachm to the pint of warm water, twice daily; iodoform or boracic acid should be used as stated.

In the case of the healthy parturient, it is of cardinal importance that the fingers of the practitioner, and any instruments or utensils which enter the vagina, should not only be clean but antisepticized. Theoretically, perfect cleanliness is all that is needed; practically, we must take the added precaution of antisepticizing hands, instruments, and all touching the patient. For the hands, bichloride of mercury 1 : 2000 or 3000 is most efficient and conve-

nient. The hands should be scrubbed with soap and warm water, rinsed, and then scrubbed with the mercurial solution; the nails cut short, filed smooth, cleaned; rings are nuisances on the hands of surgeons and obstetricians; the cuff removed, shirt sleeve rolled up, and forearm cleansed. It is well to have a nail brush and bottle of bichloride tablets lying on the top of the articles in the obstetric bag, so that when haste is needed, a tablet may be thrown into a basin of water and the hands antisepticized at once. Rubber douche tubes and other rubber appliances may be antisepticized with bichloride solution, 1 : 1000. Metal instruments and articles may be treated by carbolic acid, 5 per cent., or creolin 1 drachm to 1 pint of water. Scalding or passing through alcohol flame is also efficient. Creolin is especially convenient because it makes a good emulsion at once with hot or cold water; carbolic acid may not dissolve properly.

When possible, the external genitals should be cleansed with soap and water and bichloride 1 : 4000. A vaginal douche of bichloride, 1 : 5000, is useful before labor. But the healthy woman, clad in clean clothing, lying upon clean bedding on a clean bed and in a clean room, is quite ready for labor, and it will be the fault of those who touch her if she has puerperal fever. While living ferments are sometimes conveyed by sewer gas, by exhalations from filth-spattered walls, and dirty hospitals, and by clothing and bedding, yet the most common manner of carrying the contagion is by hands and appliances. And dirty walls, whether roughly or smoothly finished, and dirty buildings may be so cleaned and disinfected as to be no excuse for an outbreak of puerperal fever.

Labor should, furthermore, be so conducted that the finger should enter the vagina as rarely as possible. If palpation and auscultation be practised early in labor, vaginal examinations need be few; the hand should be washed in bichloride before each examination. When the head comes upon the perineum the patient should lie on her left side, her buttocks brought to the edge of the bed, a pillow between her knees. The practitioner may conveniently sit beside the bed, facing her feet, having within reach a basin of bichloride solution, 1 : 2000, in which are bits of old clean linen or absorbent cotton. As labor progresses, the perineum should be cleansed with the bits of cotton or linen, which are then thrown into a receptacle beneath the bed. As the head emerges, the anus should be covered by cotton, and the right hand laid broadly and firmly on the perineum, the posterior commissure being received in the curve between the thumb and index finger.

In painful or precipitate labor, the left forearm may pass over the pubic joint and the head be held up beneath the pubes by the arched fingers of the left hand; when the patient threatens to expel the head suddenly, tearing the perineum, one hand may be slipped over the other, both covering the vulva, holding back the head. Cleanly practitioners keep their fingers out of the rectum, which is a sewer not concerned in normal labor. The fingers should not enter the vagina to deliver the head in normal labor, thus avoiding contagion.

The placenta should be delivered by expression, and thus entering the vagina be again avoided; one thorough vaginal douche, bichloride 1 : 5000, may be given when labor is complete; tears of the genital tract which need repair should be closed at once. Fissures and small tears may be dusted with acid salicylic 1 part, starch 5, or powdered boric acid. After instrumental delivery or version, and after the expulsion of a syphilitic or dead fœtus, vagina and uterus thould be thoroughly washed out with bichloride, 1 : 5000. From 30 to 60 grains of iodoform in suppositories may be left in the uterus in very complicated cases. A healthy woman needs but one douche after labor; the external genitals should be washed with bichloride, 1 : 5000, twice in twenty-four hours. When possible, the lochia should be received on clean old linen, and burned when removed. The following simple antiseptic napkin costs less than two cents each, if the materials are bought in quantities: a strip of picked oakum ten inches long, six wide, two thick; on each side of this two inches of cheap cotton batting, the whole enclosed in a strip of cheese cloth two feet long. This is soaked in bichloride 1 : 2000, and dried. On an average, six are used for each of the first three days; four daily afterward; they should be removed when soaked through, and burned.

Puerperal fever, practically, is of two kinds: one in which poison is directly absorbed by the uterine circulation at labor; the other, in which poison is absorbed through the lymphatics from the vagina. The latter is the most common; is marked by swelling, infiltration, ulceration of the genital tract, with absorption and pyæmia. Its symptoms are fever, pain in the abdomen, foul lochia, high pulse. It is to be treated by thorough examination of the vagina, touching ulcers with iodine and carbolic acid; by four vaginal injections in twenty-four hours, of bichloride 1 : 5000, or creolin 30 drops to the pint, after the douche, iodoform or boric acid to be freely sprinkled in the vagina. Abdominal pain is best treated by turpentine stupes, followed by dry heat. Intestinal elimination should be prompt and thorough; 5 grains of calomel with soda may be given at night and a saline in the morning, or concentrated saline solutions in small repeated doses. Food should be liquid, easily digested and abundant; alcohol may be freely given. Quinine, 5 grains three times daily,

or sodium salicylate, 120 grains three times daily, is useful. Antipyrin in 5 grain doses repeated two or three times at night will relieve restlessness and pain. Large doses of antipyretic drugs and of opium are to be avoided.

Should the symptoms persist after such treatment for forty-eight hours, the uterine cavity must be disinfected. If the uterus is relaxed, the cervix torn, the os open, an ordinary douche tube may be attached to the fountain syringe, and after a vaginal douche a quart of creolin 1 drachm to the pint, carbolic acid 2 per cent., thymol 1 : 1000, boric acid saturated solution, alcohol and water 1 : 3, or bichloride 1 : 8000 or 10,000, at a temperature of 100° to 110° F., should be allowed to pass gently into the uterus, the return flow being carefully observed; the fountain syringe should be three feet above the patient's bed. If the os is not widely open, an intra-uterine catheter should be used, or a large vesical catheter, while the os be held partly open by dressing forceps. These injections may be made twice daily, vaginal douches continuing. If the lochia continue foul after intra-uterine douches, the use of a large bladed dull curette is indicated, to remove infected decidua accompanied by the douche; this should rarely be repeated if thoroughly done at first, and iodoform in suppositories may be placed in the uterus afterward. By these means the genital tract may be thoroughly disinfected, and after the faithful use of intra-uterine douches for a few days their continuance is of doubtful utility. Vaginal douches should continue, and the treatment be directed to the pyæmia or septicæmia from which the patient suffers.

Pyæmic abscesses, when external, should be opened, drained, and disinfected. For the constitutional debility and fever which accompany both septicæmia and pyæmia, alcohol should be pushed to the verge of intoxication. For fever, antipyretics should rarely be given; temperature should be reduced by sponging with cold or hot water, by packing in cold or hot wet sheets, occasionally by the graduated bath. A reduction of fever by these means will be accompanied by a return of appetite; milk, eggs, soups, beef-essence, scraped beef, with the best wines and brandies, should then be taken. The only antiseptic which can be safely used internally is alcohol, and that should be pushed; from one to two pints of brandy in twenty-four hours, with wine in abundance, has been given with good results. When vomiting occurs, cocaine may be used to advantage. For septic diarrhœa, bismuth salicylate may be freely given. The best brandy to be had in America is Naglee's California brandy; if this cannot be procured, old whiskey is more apt to be pure than so-called French brandies. Alcohol and water will occasionally be retained when no other form of alcohol can be taken. The continued administration of quinine, 5 grains three times daily, or sodium salicylate 10 grains three times daily, may be continued *if the stomach be not disturbed by them;* if this happens, they should at once be abandoned, and alcohol and food made the principal treatment. Puerperal peritonitis may be treated by incision, introducing a tube among the intestines, and flushing the abdomen with hot water (110° F.). Ice, applied to the abdomen or to the head, has been a useful adjuvant. Faithfully treated upon the principles stated, seventy per cent. of cases of puerperal fever have recovered in the practice of those who have most thoroughly studied the subject.

THE TREATMENT OF HYSTERICAL APHONIA, ASSOCIATED WITH HYPERTROPHIC RHINITIS, BY CAUTERIZATION OF THE TURBINATED BODIES.

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PATHOLOGICAL reflexes which have been described as emanating from the nose are so numerous and diverse that, unless one be intimately familiar with the possibilities, a sense of scepticism might arise. The term "reflex" is, doubtless, often misapplied, yet it has a definite significance; sneezing, for example, is a physiological reflex designed to rid the upper respiratory tract of irritating particles which may have gained access thereto. The sensory impression in the nose travels *via* the nasal branches of the ophthalmic division of the fifth nerve and the nasal branches of Meckel's ganglion in connection with the superior maxillary division of the fifth nerve to the medulla. It is there reflected to the respiratory, pneumogastric, glosso-pharyngeal, and other centres, whence efferent impulses result in the deep inspiration, the forced expiration, and the coincident spasm of the pharyngeal muscles termed a sneeze. With a violent sneeze is often combined the element of cough, in which case contraction of the laryngeal muscles is excited in the same manner by nasal irritation.

"Nasal cough," as a pathological reflex, has been established by John N. Mackenzie,[1] Wilhelm Hack,[2] and others.

Cough was instantaneously excited whenever I passed a cotton probang into the left middle meatus, in the case of a child who suffered from polypi of

[1] Nasal cough, etc., American Journal of the Medical Sciences, July, 1883. Cases of Reflex Cough due to Nasal Polypi, Transactions of the Medical and Chirurgical Faculty of Maryland, 1884

[2] Ueber eine Operative Radical Behandlung von Migräne Asthma, Heufieber, etc. Wiesbaden, verlag von J. F. Bergman, 1884.

that nostril, and this phenomenon was repeated many times in the course of treatment. Otherwise cough was not one of the symptoms, and no cough could be excited by the same manipulation in the right nasal fossa, which was nearly normal. Evidently the polypi maintained a state of superexcitation in the surrounding area, to which only the additional irritation of the cotton was necessary to excite reflex cough.

The terms "neurosis" and "nervous habit" are also often of indefinite significance, yet the existence of a neurotic temperament is conceded by everyone. Neurotic individuals are more susceptible to some or all forms of nervous impressions. Had the child above mentioned been of more pronounced neurotic temperament, it is probable that the polypi alone would have sufficed to produce cough, as in Dr. Mackenzie's cases.

With another child suffering from atrophic rhinitis, the passage of a cotton probang into either middle meatus invariably provoked cough; and in still another patient affected with hypertrophic rhinitis and septal deformity, in whom cough was a prominent symptom, manipulation anywhere in the nose excited such paroxysms of cough as seriously to interfere with treatment.

From these observations it is apparent that the "sensitive areas" are not circumscribed, but cover in some degree all portions of the nasal fossa, the anterior parts being quite as sensitive in this respect as the posterior parts.

Spasm of the glottis may ensue by reflection of irritation from the naso-pharynx, as in a young woman who had suffered for years from typical attacks of laryngeal spasm, and in whom examination disclosed a mass of adenoid vegetations. Direct irritation of this hypertrophy accidentally made by a strong upward spray, and again purposely by means of a probe, resulted in attacks characterized by prolonged, shrill, whistling inspiration and cyanosis, the second one of which lasted for a minute—suggesting preparations for laryngotomy, and was so alarming that I willingly refrained from further experimentation in this direction. Removal of the adenoid hypertrophy—not quite complete because of the brevity of her stay in town—ameliorated the condition from several attacks daily to a mild one every week or two.

That the irritation of adenoid hypertrophy in the naso-pharynx may excite, reflexly, a much more widely distributed spasmodic state than that of the larynx alone was demonstrated by a child, sent me by Dr. E. J. Doering, who had suffered from violent and rapidly recurrent asthmatic seizures, which resisted change of climate and all forms of treatment until a mass of adenoid vegetations was removed. Only four comparatively mild attacks occurred during the following year, and these can be accounted for by remaining remnants of the adenoid growths, in connection with a disposition to "catch cold" and a susceptibility to bronchitis.

Nasal irritation acting reflexly in conjunction with weak and excitable nerve-centres, is further cited among the causes of migraine, supra-orbital neuralgia, otalgia, chorea, epilepsy, etc.; while, in turn, muscular action in the larynx may be excited reflexly by distant irritation elsewhere than in the nose, of which "aural cough," caused by irritation in the external auditory canal of the auricular branch of the pneumogastric nerve, is a familiar example.

I have cited these illustrations as a reminder of the established fact that nasal irritation is capable, under certain conditions, of exciting muscular action in the larynx. *It is now proposed to study circumstances from which it would seem that this rule can be worked the other way, and the correlation between the nerves of these organs utilized, therapeutically, to correct functional laryngeal paresis by artificial irritation applied to the nasal tissues.*

Sister C., a teacher in a Roman Catholic academy, suffering from "hysterical aphonia," was referred to me by Dr. W. E. Quine. She had had a previous attack two or three years before. Treatment then was of no avail, phonation having commenced finally, unassisted, as suddenly as it had disappeared. The last seizure commenced suddenly, was of some weeks' duration, and had resisted many forms of treatment. She was very anæmic and generally debilitated, but seemingly devoid of serious organic disease or pronounced hysterical manifestations. The inferior turbinate bodies were much hypertrophied, in consequence of which one or the other nostril was constantly occluded. Laryngoscopic examination disclosed that paretic state of the vocal cords which, in the absence of other cause, is commonly attributed to hysteria. The bands presented a relaxed, flabby aspect, and upon attempted phonation they would scarcely meet in the median line, then instantly separate, leaving an elliptical space or a slit between them.

The usual remedial measures—intra-laryngeal faradization, alkaline and astringent sprays, iron and strychnine internally—employed during three weeks, proved of no avail. Then, in view of possible association with the hypertrophic rhinitis, electro-cauterization of its inferior turbinals was commenced. During the two days following the first linear burn, about four centimetres in length and in depth to the bone, she spoke a few words aloud. After its second cauterization the voice returned permanently, increasing somewhat in strength as treatment progressed.

In another case, Mrs. G., aged forty years, aphonia supervened upon a severe "cold" six weeks before There were signs of infiltration in the right infro-clavicular region, but the bacillus tuberculosis was not discovered. Pulmonary pains, harassing cough, profuse expectoration, sore throat, and gastro-

intestinal derangement had been of frequent occurrence for years. She was of a highly nervous temperament.

On attempted phonation, the cord from the anterior commissure to the vocal processes would meet, but again instantly separate, leaving, in this position, a narrow elliptical slit, while a triangular space always remained between the segments of the cord, posterior to the vocal processes. The paresis was associated with only slight congestion of the larynx. She had hypertrophic rhinitis, follicular pharyngitis, and chronic tonsillitis. Constitutional treatment, intra-laryngeal faradization, alkaline and astringent sprays, and cauterization of the enlarged pharyngeal follicles, during three weeks, failed to improve the voice. The enlarged turbinated bodies seemed to occasion no inconvenience, but I now subjected them to electro-cauterization, as in the previous case, and with precisely the same results. Within two days she spoke some words aloud, and after the second treatment she permanently regained her voice. Now, after fifteen weeks, the vocal bands still appear relaxed, and the triangular space, though less, is yet present, notwithstanding which she speaks in a fair tone of voice.

The muscles involved in each of these cases were chiefly the adductors, thyro-arytenoidei interni, crico-arytenoidei laterales, and the inter-arytenoideus, the latter especially in the case of Mrs. G., as was shown by the triangular space mentioned. These muscles are supplied by the recurrent laryngeal branch of the pneumogastric nerve, which also receives fibres from the spinal accessory. The thyro-arytenoidei interni act at the same time as tensors, and, further, it is not improbable that the abductors, crico-arytenoidei postici, supplied by the same nerve, were sufficiently involved to affect their tensor function. Likewise the especial tensors—the crico-thyroidei, supplied by the superior laryngeal branch of the pneumogastric—were possibly involved.

Few cases described as "hysterical aphonia" belong strictly to that category. Gerhardt, cited by Sir Morell Mackenzie, thinks some of them belong to the class of "reflex paralyses," and I am informed that he has reported a case cured by cauterization of the inferior turbinated bodies. More often it is the simply anæmic and those debilitated by phthisis, independently of laryngeal tuberculosis, who suffer from functional aphonia. It follows inflammation and laryngeal rheumatism from "cold," in which case the congestion disappears, but the aphonia remains indefinitely.

The defect may lie in a perverted distribution, or in an inadequate supply of nerve-force to the parts, or there may exist a state of inherent muscular weakness requiring increased nerve-force for action, which, in debilitated subjects, is not forthcoming. Whichever it may be, if we can stimulate energetically and somewhat continuously the branches of the pneumogastric nerve which supply the larynx, it would seem possible to restore their flagging energies or to redirect the perverted nerve-force into its proper channels.

We have seen that the nerve-filaments of the nares are in intimate reflex communication with those of the larynx, and that spasmodic action in the normal larynx can be excited by pathological irritation in the nose and naso-pharynx. Why, then, may not the larynx, in a state of paresis, have its nervous supply reflexly energized to the normal standard by cautery irritation to the nerve filaments supplying the inferior turbinals of the nose?

The excitation passes to the medulla *via* the nasal nerve, a branch of the ophthalmic division of the fifth, which supplies the anterior end of the inferior turbinate body, and *via* the nasal branch of the anterior palatine which supplies the rest of the turbinal, descending from Meckel's ganglion which is connected by its sensory root with the superior maxillary division of the fifth nerve. Reaching the medulla, it is reflected to the pneumogastric and spinal accessory centres, to be transmitted thence to the laryngeal muscles. This is submitted as seemingly the most reasonable explanation of the results obtained in the cases cited.

What causal relationship, if any, existed between the hypertrophy of the inferior turbinate and the laryngeal paresis is not easy to determine. The hypothesis advanced by Woakes,[1] in explanation of paresis of the laryngeal adductors, and of the velum palati in association with ethmoiditis, that irritative impulses pass from the nose *via* the sympathetic system to the superior cervical ganglion, thence as vaso-dilator waves to the arterioles of the parts, occasioning paresis through vascular engorgement, is not tenable in these cases, because it does not explain the immediate improvement of the voice upon the additional irritation of the cautery to the turbinals.

Circumstances in each case preclude the supposition of action through mere mental impression; the intra-laryngeal faradization and cauterization of enlarged pharyngeal follicles being equally impressive and arousing in their nature, and, to the mind of a patient, more in harmony with the object in view than treatment directed to the nose. Nor would one anticipate the same results from cauterization at random elsewhere on the body, for it is demonstrated that a special reflex relationship exists between the sensory filaments of the nares and the motor nerves of the larynx; and, finally, with the physiological action of the remedy thus known, so to speak, one is assisted in distinguishing between the *propter hoc* and merely the *post hoc*.

70 MONROE STREET.

[1] Nasal Polypus, etc., in Relation to Ethmoiditis. American edition, p. 48.

VALUE OF THE GENU-PECTORAL POSITION IN GYNECOLOGICAL TREATMENT.

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I AM well aware that the genu-pectoral position is frequently mentioned, but I believe its full value is not generally appreciated. I have, for several months past, utilized this position much oftener than formerly, both in hospital and in private practice, and am convinced that in certain pelvic disorders it is of great value and will obviate the need for more dangerous procedures.

Among the indications for this position are posterior displacements, with or without adhesions, prolapse, enlargements of the uterus from any cause, and pelvic inflammations. In many cases of anterior displacements patients are materially relieved by it. If practised correctly, we simply call into use gravitation, or atmospheric pressure by loosening all the bands about the abdomen, in order that the abdominal viscera may drop down while the patient is in the position, thus forming a partial vacuum between the abdominal and pelvic viscera; and now, if the perineum is retracted, the atmospheric pressure through the vagina forces the uterus and appendages down toward the abdominal viscera. By the action of gravitation, blood-pressure is much diminished in the pelvis; in other words, the congestion is greatly relieved. If the uterus is displaced posteriorly, all pressure opposing replacement is removed, and, if there are no adhesions, it will, as a rule, return in a few minutes nearly or quite to its normal position, without the use of repositors or sounds; if it does not, after the patient has been in this position a few minutes, gentle pressure from behind will replace the uterus without pain to the patient. The patient should be required to repeat this several times daily, and after a few days she will be prepared for a pessary. If there are adhesions binding the uterus down, order douches of hot water daily until sensitiveness is diminished, then advise the knee-chest position several times a day, with or without deep respirations, *pro re nata*—the frequency and duration of the posture being governed by the amount of pain produced. Later, gentle pressure from behind may be added to the atmospheric pressure. This treatment has a marked resolvent effect upon the adhesions, and, when added to the usual treatment, materially hastens the recovery.

I have treated several bad cases of posterior adhesions during the past year, with most excellent results, and among them one who was advised by a prominent Chicago gynecologist to have the adhesions broken up through abdominal section. To-day she calls herself well.

Patients properly instructed can do much to aid the physician in his efforts. I recall two cases who could not, in the beginning of the treatment, remain long in this position without severe pain, but by regulating carefully the treatment, they were greatly improved. If the uterus is retroverted and gravid, with no tendency to right itself, the dangers of producing abortion are greatly diminished if the patient remains in this position a few minutes before an attempt is made at replacement.

Patients who suffer, soon after getting up from confinement, from dragging weight and pain in the pelvis, back, and sides, are much relieved by taking this position three or four times a day, and especially for a few minutes before retiring; and I believe this assists much in preventing subinvolution and displacements, which are so apt to occur at this time.

For women who work hard, and are on their feet all day, and who, when night comes, complain of fulness and pressure in the pelvis, with dragging pains in the back, etc., I know of no simple means that will give so much relief as the knee-chest position, with a few deep inspirations, before retiring. By so doing, if there is a tendency to prolapse or congestion of the uterus, or too much traction on the ligaments, the uterus is usually replaced, circulation is improved, and the patient rests better as a result.

Sims's position, I admit, is a fair substitute in some conditions, but is not so generally useful, and its favorable results are not so marked. I do not claim, by any means, that this position is a panacea for diseases of women; but it is a valuable adjunct in treating all chronic inflammations of the pelvic viscera and most displacements, and, while I am aware that it may be resorted to too vigorously, especially when there are adhesions, I feel sure that if it were utilized more often, patients would be saved much pain, and recovery would be hastened in a majority of cases. But this adjunct, as well as many others, in order to do good, must be directed by one who understands the physiology and pathology of the pelvic organs.

UNIVERSITY OF MICHIGAN.

CLINICAL MEMORANDA.

ORTHOPÆDIC.

Torticollis as a Cause of Scoliosis.—The great importance given of late to rotation of the bodies of the vertebræ, paralysis and hypertrophy of the thoracic and spinal muscles, faulty positions, contracted inflammatory products intra- or extra-thoracic, inequality of the lower extremities, etc., has led many to neglect or entirely overlook torticollis as a direct factor in the etiology of scoliosis.

The study recently of two interesting cases in which wry-neck was the primary and only cause of the lateral curvature has led me to record them.

CASE I.—C. M., aged six years, blonde female child of healthy parentage and with good previous history, came under my care in 1886, suffering with marked

lateral curvature of the spine. The mother stated that the child was delivered with instruments, and had from birth a wry-neck, the right sterno-mastoid being contracted and the chin drawn to the left side. This appeared to diminish somewhat, but when about five years of age the curvature of the spine was observed. On examination, there was found a marked cervical curve to the left, another in the dorsal region to the right, and a slight curve in the lumbar region. The child was fairly developed for her age, and the lower extremities were, on measurement, exactly equal in length. The head could not be brought beyond the median line. Tenotomy was proposed, but for the time rejected, and a lateral curvature brace applied, with double-bar suspension, massage, and the use of a hair pillow under the right side. The case did not progress satisfactorily, and the year following a tenotomy of the sterno-mastoid was performed, after which the head assumed a natural position and the deformity diminished under appropriate treatment.

CASE II.—T. B., aged fifteen years, residing in Philadelphia, consulted me recently for a marked curvature of the vertebral column. The maternal father and brother had died of phthisis, but otherwise no hereditary disease or history of deformity could be elicited. Since birth he has always had wry-neck, and there has always been some curvature of the spine and elevation of the right shoulder. The patient is a well-developed youth, whose general health has always been excellent. Two years ago, whilst walking, he was seized with a severe pain in the right shoulder, which continued and led him to seek medical advice. On examination, there was found a marked cervical curve to the left and a compensatory dorsal curve to the right, with elevation of the right shoulder. The head was slightly flexed and drawn to the left side. The lower extremities were of exactly the same length, and there was no tilting of the pelvis.

The exact process by which a cervical curvature from wry-neck induces a lateral curvature of the entire column may be interesting. The deviation of the head to one side and the flexion of the chin upon the thorax by the unilateral contraction induce a bowing of the cervical vertebræ to that side and rotation of the bodies upon one another. There is at once produced a characteristic alteration in the outline of the neck, the graceful double curve becomes flattened, the neck shortened, and the shoulder less prominent on the one side, while the curved line becomes more pronounced, the neck longer, and the shoulder more prominent on the other side.

The natural balance of the column being disturbed, nature endeavors by a compensatory dorsal curve to restore the equilibrium. This induces a rotation of the bodies of the dorsal vertebræ with all its attendant deforming features: the flattening and twisting of the scapula on one side, the deviation of the spinous processes in a serpentine direction from the median line, and the elevation and projection backward of the scapula on the other side. With the development of a third or lumbar curve the crest of the hip becomes obliterated on one side, the waist line deepens, the hip becomes prominent on the other side, and the lateral outlines become everywhere less symmetrical.

The contraction continuing, anatomical changes are produced which not only tend to fix the vertebræ in their deformed relations, but also to exaggerate the abnormal curves. These changes are chiefly atrophy of the bones and intervertebral cartilages on the concave side of the curve, with shortening of the ligaments and muscles, and hypertrophy of the bone and cartilage, with elongation of the ligaments and thickening of the muscles on the other side.

The diagnosis of wry-neck as a cause of lateral curvature, while extremely easy when seen early, becomes exceedingly difficult when the primary, secondary, and even a tertiary curve have developed and the position of the head from the existence of these curves has lost some of its most distinctive features. With the development of the spinal curves, the added prominence of the hip, the growing out of the opposite shoulder, and the distortion of the thoracic wall, in the absence of a direct previous history, the diagnosis becomes uncertain and the treatment, if empirical, becomes unsatisfactory.

In the second case there was no history of direct injury at the time or following delivery, but there was a history of torticollis. With this added to the entire absence of other causes, especially inequality of the lower limbs, the wry-neck as the primary cause of the marked primary cervical and secondary dorsal curve could not be mistaken.

In this case the head was freely movable, but rested in natural repose with the chin to the left side. The patient has a well-developed muscular system, and has responded so well to the usual methods that an attempt will be made to correct the deformity without resorting to tenotomy.

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MEDICAL PROGRESS.

Aristol, a Substitute for Iodoform.—DR EICHHOFF, of Eberfeld, writes quite enthusiastically of *aristol*, a compound of iodine and thymol, recently manufactured by Bayer & Co. (*Monatshefte f. praktische Dermatologie*, January 15, 1890). Eichhoff believes that the new drug will supplant iodoform, not only in dermatological practice, but in other conditions where iodoform has heretofore been used, having the therapeutic properties of the latter drug without its disagreeable odor or toxic effects. The author has employed aristol only in diseases of the skin, including varicose ulcers, eczema, lupus, psoriasis, etc., and, after reporting his cases in detail, concludes:

1. That aristol is in all cases a harmless drug.
2. That it is a powerful parasiticide.
3. That in the ulcerations of tertiary syphilis curative results are obtained more rapidly than with any other drug.
4. It is the most useful of all applications in the treatment of lupus.
5. In the treatment of psoriasis it does not act quite as rapidly as chrysarobin or pyrogallic acid.

The aristol was in most cases applied as a ten per cent. ointment in vaseline.

Glycerite of Belladonna.—MR. A. W. GERRARD highly recommends the glycerite of belladonna for checking the pain of poisoned wounds, boils, and abscesses. Applied to the breast it suppresses the secretion of milk

with far more certainty than belladonna plaster. It should be made according to the following formula:

℞.—Alcohol. ext. of belladonna } of each 1 part.
Alcohol }
Glycerin . . . . . 2 parts.

Mix the extract and alcohol before adding the glycerin.

A formula that will serve the same purpose, and which is more elegant, is as follows:

℞.—Atropine sulphate . . . 4 grains.
Camphor water . . . 2 fluidrachms.
Glycerin . . . . . 6 " —M.

—*Illustrated Medical News*, January 25, 1890.

Formula for Sulphonal.—MOSSÉ recommends the administration of sulphonal, particularly where sleeplessness exists from bronchitis, in the following manner:

℞.—Sulphonal . . . . . 10 grains.
Rum . . . . . 1 ounce.
Syrup of acacia . . . . 1 "
Water . . . . . 2 ounces.—M.

Treatment of Eczema.—After considering the necessary means for the internal treatment of eczema, VEIEL recommends the simultaneous administration of arsenic internally along with local treatment. If chlorosis exists, he prescribes iron, to be given an hour before meals; or, if the eczema is dependent on scrofulosis in children, he recommends cod-liver oil and a thorough regulation of the diet. In pruritus he employs chloral internally combined with bromide of potassium. To allay the sensation of itching which is apt to accompany acute eczema associated with much secretion, he recommends the formula originally devised by Unna, consisting of:

℞.—Oxide of zinc . . . . 15 parts.
Gelatin and glycerin, of each . 25 "
Distilled water . . . 45 " —M.

The skin should be washed sufficiently frequently to remove the scabs and keep it clean. Where the eczema is exceedingly moist, the parts may be bathed very often to remove the scabs. Where the eczema is general and the itching is intolerable, a powder of starch containing two per cent. of camphor may be added, and if this does not succeed, borax, salicylic acid, alum, glycerin, and distilled water may be employed, the borax and distilled water being in the proportion of two per cent.

Caries of the Teeth.—According to MILLER, the following formula is one which will be useful in the prevention of dental caries. It consists of:

℞.—Thymol . . . . . 4 grains.
Benzoic acid . . . . 45 "
Tincture of eucalyptus . . ½ ounce.
Alcohol . . . . . 3 ounces.
Essence of peppermint . . 10 drops.—M.

or,

℞.—Thymol . . . . . 3 grains.
Benzoic acid . . . . 45 "
Tincture of eucalyptus . . ½ ounce.
Chloride of mercury . . 10 grains.
Essence of peppermint . . 10 drops.—M.

For these to prove efficacious, it is necessary that the mouth should be thoroughly rinsed, and that the liquid should find entrance into the spaces between the cheek and the gums, and also the spaces between the teeth. Particularly is this the case after animal foods have been taken.

Tamponing the Uterus for Post-partum Hæmorrhage.—DÜHRSSEN'S method of checking post-partum hæmorrhage by plugging the uterus with iodoform gauze, is apparently growing so steadily in favor that the following description of the *technique* (*Lancet*, January 25, 1890), as carried out by Dührssen himself, should be read with interest.

If the uterus does not contract under friction and ergotine injection, the patient is at once placed in the lithotomy position, the external genitals are thoroughly cleansed with soap, and three per cent. carbolic solution; the catheter is passed, the vagina disinfected with at least one quart of three per cent. carbolic solution, and the uterus is then irrigated with the same, or, if the patient is very anæmic, with a solution of salicylic acid (3 per 1000) or with simple boiled water. If bleeding continues, the uterus is explored with two fingers, to make sure that nothing is left behind. The cervix is then seized with one or two vulsellæ and drawn down to the vulva; or the plugging may be done through a duck-bill speculum, or even with two fingers of the left hand used as a duck-bill speculum. The end of the gauze bandage is then seized with long speculum forceps, the left hand grasps the fundus uteri, and the end of the bandage is carried up to the fundus; the bandage is then packed into the uterus bit by bit. The vagina is next packed in a similar manner, or, if there is cervical bleeding, with tampons of cotton-wool. Care must be taken that the packing material is not soiled on its passage into the uterus, for in the only fatal case of sepsis recorded the gauze bandage had been allowed to trail on the floor. This, however, was not in Dr. Dührssen's practice. In severe cases he adopts plugging in the first instance as the safest means. In only one case was hæmorrhage immediately fatal, four other cases died of anæmia after arrest of the bleeding, one of these of œdema of the lungs, which was present before the uterus was plugged. The other case was that of sepsis mentioned above, in which the gauze had been allowed to trail on the floor.

The table accompanying Dührssen's paper (Volkmann's *Sammlung klinische Vorträge*, No. 347) includes many cases of severe hæmorrhage. While it is difficult to estimate the gravity of each case from a description, it would seem that in plugging the uterus and vagina we have a valuable addition to our resources in the treatment of post-partum hæmorrhage, and one that is not prone to substitute one great peril for another; indeed, it is easy to understand that, when properly performed, sepsis is rather avoided than encouraged, the gauze acting as an efficient drain.

Nephro-lithotomy.—In a valuable paper upon renal calculus, MR. W. H. A. JACOBSON (*British Medical Journal*, January 18, 1890) submits the following practical points to be observed in the performance of nephro-lithotomy:

1. Count the ribs. That this is not an unimportant

detail is proved by the fact that Dumreicher, of Vienna, accidentally opened the pleural cavity in an attempt to remove a pyelo-nephritic calculous kidney. *Post-mortem*, the last rib was found to be rudimentary, and the pleura projected below the lower edge of the eleventh rib.

2. Make a sufficiently free incision, especially in a stout patient, and a deep loin. Additional room may be gained by converting the usual lumbar incision into a T-shaped one, or by making use of König's incision, in which the muscles are cut through as far as the rectus, and the peritoneum pushed forward. A small stone in a kidney will always be liable to be overlooked, but a surgeon does not give a patient or himself a fair chance who is content with exposing the kidney through a limited incision, and then trusting to punctures with a needle.

3. Pack the colon out of the way with sponges, as it is often troublesomely distended with flatus in these cases.

4. If the stone cannot be felt either in the pelvis or after palpation of the posteror and anterior surfaces of the kidney, this should be drawn up and out of the wound as far as possible, and again examined, a careful watch being kept upon the pulse.

5. In puncturing the kidney, try, as far as possible, to open the calyces systematically.

6. If palpation and acupuncture fail to reveal a stone, the kidney should be carefully opened and sounded.

7. Hæmorrhage from an incision into the kidney is certainly arrested by firm, careful plugging with strips of sal alembroth gauze. On the five occasions on which Mr. Jacobson has adopted this plan, he has removed the strips the next day with the aid of a few minutes' anæsthesia, gas sufficing for this. It is said that the plugging may cause vomiting, but this did not occur in any of his cases. Care must be taken that the plugging is thoroughly done. If inadequate, it will have to be repeated in a few hours—perhaps more than once—thus leading to exhaustion, and setting up cellulitis, which may of itself be fatal, owing to the important relations of the kidney.

Treatment of Pregnancy during Phthisis.—At a recent meeting of the Obstetrical Society of London (*British Medical Journal*, January 18, 1890) DR. WILLIAM DUNCAN reported a case of pregnancy during phthisis, in whom he had induced premature labor. In the course of his remarks he stated his belief that during pregnancy phthisis was not retarded, as was formerly believed, but hastened. This was especially the case in women between twenty and thirty years of age. When phthisis was progressive, in early pregnancy, there could, in his mind, be no question that the proper course to pursue, after careful consideration of the case in consultation, was to empty the uterus of its contents. Even when the phthisis was stationary, it was safer to empty the uterus at once than to let the pregnancy proceed to term. When the patient was seen for the first time late in pregnancy, the child being viable, the case was different. He would be guided, under these circumstances, by the condition of the lungs. If phthisis were stationary, though well marked, he would wait until full term had nearly arrived, and then, in order to save the patient all suffering and the strain on her system consequent on natural delivery, he would dilate the cervix with graduated bougies, followed by the hydrostatic dilators, until it was sufficiently expanded to permit of delivery by the forceps or version, as the case indicated. Full antiseptic precautions would be taken. If, however, the pulmonary disease were markedly advancing, the interests of the mother and child would be best served by effecting delivery in the same manner without delay, instead of waiting until the full term had been reached.

In discussing this paper, DR. PLAYFAIR thought that the treatment advocated was unjustifiable, and liable to serious abuse in early phthisis. In advanced phthisis the matter was different; but even then, there were not sufficient grounds or believing that premature labor would materially change the course of the disease. On the whole, he believed that Dr. Duncan's case was a dangerous precedent. The other members of the society, without exception, condemned the course of treatment advised and pursued by Dr. Duncan.

Menthol in Diseases of the Throat and Nose.—MR. J. LENNOX BROWNE says that the vapor of menthol checks in a manner hardly less than marvellous, acute colds in the head, and is also to be recommended with a certainty of success, if used on its first onset, in arresting epidemic influenza, even in cases in which the nasal symptoms commonly associated with the word influenza are not manifested.

Menthol exerts its action in the following manner:

1. It stimulates to contraction the capillary blood-vessels of the passages of the nose and throat, always dilated in the early stages of head cold and of influenza.

2. It arrests sneezing and rhinal flow.

3. It relieves, and indeed dissipates, pain and fulness of the head by its analgesic properties, so well known when applied externally to the brow in cases of *tic douloureux*.

4. It is powerfully germicide and antiseptic. It thus kills the microbe of infection, and prevents its dissemination.

The remedy may be employed by means of a general impregnation of its vapor through a room or house, or locally to the nostrils and air passages: for both of which purposes there are several methods:

(*a*) A ten to twenty per cent. solution of menthol in almond oil, in liquid vaseline, or in one of the many other odorless paraffin compounds, can be sprayed into the nose or throat, or about a room.

(*b*) By placing twenty or thirty grains in an apparatus specially designed by Rosenberg for administering the drug in cases of laryngeal phthisis by inhalation, in the form of vapor mingled with steam.

(*c*) By a simple arrangement of placing a saucer of water containing a similar quantity of the crystals over a gas burner in the hall, by means of which the whole house is kept constantly permeated with the drug.

(*d*) But by far the most convenient method for personal use is to carry always the ingenious pocket menthol inhaler, known as Cushman's, which should be used not only on the first approach of an attack, but three or four times a day in "cold-catching" weather by those subject to coryza.

The instrument consists of a glass cylinder four inches in length, half an inch in diameter, and open at both ends. The tube contains crystals of menthol closely

packed and prevented from escape by perforated zinc and cork. The opening at one end is twice the size of the other, the larger being intended for inhalation by the mouth, the smaller for the nostril. The latter is the method which the author, by preference, recommends. It is not to be simply smelt, but well sniffed or inhaled, so as to cause some tingling or smarting, a sensation which is quickly followed by that of coolness, and openness of the previously "stuffed" and heated nostril. By its use, when the nasal discharge is excessive, it is checked; when deficient and thickened, as in hypertrophic rhinitis, its healthy character is restored; and when arrested, inspissated and malodorous, as in atrophic rhinitis, fluidity is promoted and the foul smell corrected.—*Boston Medical and Surgical Journal*, January 30, 1890.

[Our own experience is that ten or twenty per cent. solutions of menthol in oil cannot be sprayed into the nasal cavities, unless there is advanced atrophic rhinitis, without causing considerable pain and discomfort to the patient.—ED.]

Preparation of Ergotin for Hypodermic Injection.—According to MR. A. W. GERRARD, the officinal ergotin (B. P.) is merely a purified extract of ergot, although it well represents the activities of the crude drug. The chief objection to its hypodermic use is the irritation it causes, which, however deeply it may be injected into the muscles, is at times very great. Gerrard finds that ergotin is very acid in reaction and full of inert matter, and that if these are eliminated great improvement results. For this purpose one part of ergotin may be treated with four parts of absolute alcohol, stirring well during the addition. Then pour off the alcoholic solution and evaporate over a water bath to a soft residue. This treatment removes inorganic salts and a mucus-like substance. The acid still remains, and should be carefully neutralized with a solution of ammonium. Ergotin thus treated is highly active, and rarely causes severe irritation after injection. To prepare a solution that keeps well for hypodermic use, rub up one part of ergotin with one of glycerin and two of water.—*Illustrated Medical News*, January 25, 1890.

Caustic Paste for the Removal of Epithelioma.—At a recent meeting of the New York Dermatological Society (*Journal of Cutaneous and Genito-urinary Diseases*, February, 1890), DR. LEWIS presented a case which had been satisfactorily treated by means of the following elaborate paste, which was first described by Dr. Bougard, of Brussels:

Wheat flour	60 parts.
Starch	60 "
Arsenic	1 part.
Cinnabar	5 parts.
Ammonium chloride	5 "
Mercuric chloride	0.5 part.
Saturated solution of zinc chloride	245 parts.

The first six ingredients are separately ground to a fine powder, and mixed in a mortar. The zinc chloride solution is then slowly added while the contents are rapidly stirred. The soft mass is then poured into an earthen pot, and, if covered, will keep in good condition for months.

In the case reported, the outer horny covering of the epithelioma was first removed with liquor potassa, the paste was then applied and allowed to remain for thirty hours, after which poultices were applied for three days. At the end of that time the slough came away, leaving a healthy granulating surface.

The Surgical Treatment of Hepatic Abscesses.—At the conclusion of these instructive lectures on the surgical aspects of hepatic abscesses, MR. RICKMAN J. GODLEE (*British Medical Journal*, January 25, 1890) submitted the following rules for the treatment of the several varieties:

1. Pyæmic abscesses do not call for surgical interference, or, if in rare cases one should point, it is only opened to relieve symptoms, but without hopes of doing permanent good.

2. The same observations apply to abscesses resulting from suppurative phlebitis of the portal vein.

3. Multiple abscesses associated with dysentery or ulceration of the bowels are very unfavorable for surgical treatment. They must, however, be opened and treated on the same lines as the single or tropical abscess, because they cannot be certainly diagnosed.

4. Single abscess of the liver, whether tropical or not, must, if it approach the surface, be opened, the following precautions being adopted:

(*a*) If it present at the epigastrium, the presence of adhesions must be ascertained before incising the liver.

(*b*) If through the chest wall, a spot must be chosen below the normal limit of the pleura; but, if by chance either pleura or peritoneum be opened, the opening must be closed with a double row of stitches before incising the liver.

(*c*) Strict antiseptic precautions must be adopted throughout, either carbolic acid or some slightly soluble salt of mercury being employed for the dressings.

(*d*) The tube must be of large size at first, and a tube of some sort must be kept in until the discharge is reduced to a very minute quantity.

If the abscess have burst into the lung, pleura, pericardium, peritoneum, or kidney, and the position of the abscess can be clearly determined, it must be opened without delay. If the position of an abscess be only suspected and the patient be losing ground, it is right to puncture the liver in the most likely situations, bearing in mind that, though usually quite harmless, a slight amount of risk accompanies this very trivial operation. This rule applies to cases in which the abscess has ruptured into any of the cavities enumerated above. If, on the other hand, whether the abscess have ruptured or not, there are no means of diagnosing the whereabouts of the matter, and the patient be not losing or even gaining ground, the surgeon should hold his hand for a time.

5. Hydatids of the upper and back parts of the liver are to be treated upon the same lines; but in cases of this sort, and in those of subdiaphragmatic abscess, it must be remembered that the diaphragm may be pushed up a very great height, thus closely simulating intrapleural suppuration.

6. Empyema, pericarditis, and peritonitis caused by rupture of an hepatic abscess or hyatid must be promptly dealt with on general principles.

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SATURDAY, FEBRUARY 22, 1890.

THE TREATMENT OF CARBUNCLES AND FURUNCLES WITH TINCTURE OF IODINE.

SINCE the discovery of the microbic origin of boils and carbuncles, there has naturally followed a modification in the means of treatment of these painful and, at times, dangerous affections. Knowing that they are caused by the entrance of specific microbes into the cutaneous glands, the rational means of cure must be sought amongst the antiseptics, which must be brought in contact with the focus of disease.

An interesting article upon this subject, by M. BEAUQUINQUE, appears in the *Revue Générale de Clinique et de Thérapeutique*, No. 46, 1889. The paper has especial reference to, and has the title, "The Treatment of Carbuncle of the Face by the Tincture of Iodine," but also speaks of the antiseptic treatment of furuncles and carbuncles in general. Three striking cases of carbuncle of the lip, all of them severe, are reported as having been successfully treated by the application of tincture of iodine. No more striking instances than these could have been chosen, for every surgeon of experience knows how serious an affection carbuncle in this situation is, as well as the extreme degree of suffering it causes. Of the old-time methods of treatment none is satisfactory, and all are here open to objections. Incision, whether crucial through the lesion, or elliptical surrounding it, is sure to provoke troublesome, if not dangerous, bleeding; poultices tend to increase the already extensive swelling and œdema—which themselves constitute, in some instances, a well-grounded source of alarm; and, for the same reason, the employment of the thermo- or galvano-cautery leaves much to be desired.

If the application of the tincture of iodine can lead to such happy results as those given by M. Beauquinque in the cases, and in the region referred to, it certainly must prove a valuable remedy for the affection wherever situated. The method of applying it is a simple one. The crust or film which closes the orifices of the carbuncle having been carefully scraped off, the tincture is applied several times by means of a brush or a dossil of cotton. The procedure does not cause much pain, and even in extensive cases does not give rise to toxic symptoms. For the latter reason, the tincture may in such instances be injected into the interior of the lesions.

Besides the tincture of iodine, other antiseptics have, of course, been employed in the treatment of carbuncles and boils, the principal ones being boric acid, carbolic acid, and the bichloride and biniodide of mercury. In order to insure success, it is necessary that the solution should be an alcoholic one, for water cannot gain entrance into the greasy sebaceous follicles wherein the source of trouble lies, whereas alcohol can. Of the above-named antiseptics, boric acid seems the least worthy of confidence, its germicidal power being so far below that of the others. Carbolic acid may, in severe cases, especially if injected into the centre of the lesion, or around it, produce toxic effects; bichloride of mercury, used in the same way, would give rise to severe pain.

In the tincture of iodine we have a harmless and efficient remedy, endowed with ample antiseptic power. If early applied, it is needless to say that the certainty of its abortive action is promoted.

The substitution of such a remedy for the knife, the cautery, or the poultice, is certainly a welcome improvement in surgical treatment, and is but one of the many things for which we are indebted to the study of bacteriology on the one hand, and to the development of antiseptic methods on the other.

ANÆSTHETICS.

IT would be hard to find, in the whole domain of medicine, any one thing which does more toward

its retardation than absolute, dogmatic assertion based upon limited experience; and the expression, that the worst enemies to science are its own friends, finds ample illustration in the question of anæsthesia. In THE MEDICAL NEWS for November 9, 1889, we attempted to show the impossibility of saying that any one substance could and should always be employed for the relief of pain, and insisted upon the employment of one or the other not because it was chloroform or ether, but for the reason that common sense indicated which was best in each case. The opinion was expressed at that time that chloroform was the more dangerous of the two, and that it required greater care in its administration than ether; a care often almost impossible to bestow if the physician is not provided with a skilled assistant. No one can deny that all anæsthetics are dangerous, and that the functional inactivity of the perceptive centres in the brain produced by their use, if it extends to the vital centres in the medulla, may cause death. The questions are, Which drug is the safest? Which has had fewer accidents? What cases should be given ether, and what cases chloroform?

For a number of years the London *Lancet* has been most vehement in its attacks on chloroform as an anæsthetic, and has been so positive concerning its views as to endanger the standing of physicians who employed this drug. The position of THE MEDICAL NEWS has been decidedly in favor of ether, but, notwithstanding this fact, the value of chloroform in certain states has not been gainsaid; neither have the opinions of a large number of physicians, particularly in the West and South, been ignored.

The object of this editorial is to place THE MEDICAL NEWS on record as protesting against the indiscriminate language used heretofore by the *Lancet*, and its positively harmful and dangerous assertions made much more recently. Having decried chloroform as a producer of awful accidents, it now not only defends it but even goes so far as to assert, editorially, that chloroform is so safe that death is never produced unless negligence on the part of the physician is most flagrant. Such utterances endanger the professional reputation and ability of everyone who uses chloroform at any time, be the circumstances what they may. There are a certain number of instances where risks must be taken, and others in which no amount of care can put aside an accident. Further than this, the most eminently skilful operators in the world have lost cases, and therefore stand accused by the *Lancet* of killing their patients because of ignorance or carelessness. If the members of the profession are willing to expose themselves to law-suits and prosecutions for malpractice when they are so unfortunate as to lose cases under chloroform, the editorial comments in the *Lancet* possess no interest and may go uncontradicted; but if the unavoidable accidents occurring under anæsthesia are to be considered as indicative of professional disgrace, it is certainly of importance that they be not allowed to pass as generally accepted facts and a reflection of the opinions of the entire medical fraternity.

SOCIETY PROCEEDINGS.

PHILADELPHIA ACADEMY OF SURGERY.

Stated Meeting, December 3, 1889.

THE PRESIDENT, D. HAYES AGNEW, M.D., IN THE CHAIR.

DR. THOMAS G. MORTON gave a partial history of a case of

TOTAL PARALYSIS OF MOTION AND SENSATION

under the care of Dr. Sinkler, at the Orthopædic Hospital, in which he removed some weeks ago the spinous processes of the eighth, ninth, tenth, and eleventh vertebræ, with a decided improvement in the symptoms. Dr. Morton commented particularly on the ease with which the operation was performed, the only instruments required being a knife and a pair of long, sharp bone-cutting forceps.

In the discussion which followed, DR. WILLIAM HUNT remarked that he had been present at the operation and was surprised at the amount of oozing. Whether this was the result of hypostatic congestion or belonged naturally to the part, he could not say. Under the use of hot water it ceased. He inquired if any one knew whether in man or animals the cord pulsates as the brain does? In this case the cord did not pulsate. He had had no other experience with the living cord, but supposed it is through the circle of Willis acting upon the full cranial contents that the familiar pulsations of the brain are produced.

DR. J. EWING MEARS said that as we are now just at the beginning of our experience in spinal surgery, every case in which operation is performed increases our knowledge. Some months ago he reported to the Academy a case of fracture of the first lumbar vertebra in which he removed the laminæ, articulating processes and spinous process of the vertebra, and in this way relieved the pressure, although he was unable to reduce the dislocation.

The fracture had been produced by a fall from a window during an epileptic seizure. There was complete paralysis of sensation and motion when the patient was brought to the hospital. At the operation he did not note any pulsation of the cord, nor was the hæmorrhage unusually free. The condition improved after the ope-

ration. Motion and sensation returned, and when he last heard from her she was able to go about on crutches.

DR. DEFOREST WILLARD said that Dr. Burrell, of Boston, who some months ago operated on the spinal column for pressure paralysis, had a pair of forceps made with the lower blade flat, while the upper blade was the cutting one. With the ordinary bone forceps he thought that there might be some danger of wounding the cord.

Dr. Willard then requested the opinion of the Fellows present, as to the best course to pursue in a case of a bad double crush, such as he had seen a few days ago; a man with both legs run over, so weak that he was apparently dying, with a feeble, fluttering pulse and yet with bleeding sufficient to require the application of rubber tourniquets. The pain of the tourniquets seemed to cause as much depression as an operation, yet the patient was too sensible to permit operation without ether. His condition was such that the administration of ether would probably have been followed by death in a short time. The man gradually failed and died in less than twenty-four hours, never reacting sufficiently to make it safe to operate. Both thighs were comminuted for some distance and there was concealed hæmorrhage, the skin not being broken to any extent. It is difficult to know what to do in such cases, whether the shock of a rapid operation would be greater than the loss of blood occasioned by delay, or more depressing than the excessive pain of a tourniquet. If the wound is large, local pressure with antiseptic packing is less painful than compression above.

DR. MORTON, in reply, said that he had had considerable experience in such cases, and when bleeding occurs from lacerated crushed tissues he always tied the bleeding vessels in the wound if possible; if this was not practicable, he then cut down and ligated the main arteries above the region of injury. He would never apply a tourniquet, because of the pain, and on account of the injury to the tissues so constricted.

DR. HUNT agreed with Dr. Morton in regard to the tourniquet. From a surgical standpoint it is our duty to try to save life, but from a sentimental one he should rather let the patient alone after taking away all sources of irritation and suffering and wait for reaction. To operate at once would be almost certain death. If reaction occurred it might become our duty to operate. He confessed that in those cases of terrible multiple maiming, especially in children, it was a relief to him to hear that death had taken the patient from our hands.

DR. F. H. GROSS had several times performed double amputation in such cases, but had not had the patients die upon the table, although they came very near it, and in one apparently hopeless case death took place on the following day. During his last term of service at the German Hospital, he had under his care a man who had fallen a distance of over one hundred feet while painting a church steeple, striking the roof and then bouncing like a ball from the telegraph wires upon an iron railing on the sidewalk. He sustained severe lacerations and was in profound shock. Valuable time was lost in persuading his friends to have him submit to two necessary amputations. Dr. Gross removed one leg and one arm near the shoulder-joint. The other arm and leg were also fractured, but the injuries there were not compound, although the bones about the ankle felt like a bag of broken crockery.[1] In his military experience, it seemed to him that men suffered more profoundly from shock when a limb was entirely carried away than when both soft parts and bone were severely lacerated and crushed by the missile.

DR. MEARS then referred to two

OPERATIONS FOR CHRONIC OSTEOMYELITIS.

The first case was that of a girl twenty-two years of age, in whom he trephined the radius in the lower third. He curetted the medullary canal, carrying the instrument upward three or four inches, cleared out the cavity and put in a drainage-tube. The patient recovered, and is now an assistant in the hospital, with a useful arm. Before the operation the arm had been useless and the seat of great pain.

Four weeks ago he performed excision of the hip-joint, removing the head and neck of the bone and scraping the acetabular cavity, which was slightly involved. After removing the head of the bone, he found the femur to be the seat of osteomyelitis; he therefore removed two and a half inches more of the bone in the hope of reaching sound bone, but in this was disappointed. He then curetted the medullary canal, carrying the curette three or four inches toward the lower extremity of the bone. The patient now was in excellent condition, suppuration has decreased greatly, she is sitting up, and the general condition is better than for months. What the ultimate result will be, and whether or not the limb will be a useful one, he was unable to state.

In the discussion which followed this report, DR. WILLARD said that about the first of last May he had excised a hip in which the femur presented the condition described by Dr. Mears. He removed several sections of bone until he got below the lesser trochanter, when, finding that the periosteum was loose and that the signs of osteomyelitis extended two or three inches further, he thought it unwise to remove more of the bone. He curetted it thoroughly, dressed it antiseptically, and in three months it had healed almost entirely. The child was in good condition, but there was some thickening about the femur that made him suspicious. He had seen the child again to-day. The wounds had reopened and the disease was progressing down the femur. Under antiseptic dressings, we often secure prompt healing of the wound, while at the same time the disease steadily creeps on. He thought that a better operation in such a case would have been amputation at the hip-joint.

DR. MORTON referred to a similar case on which he had operated many years ago, at the Pennsylvania Hospital. There was great shortening, with a useless limb. The patient died subsequently from phthisis.

He said that Dr. W. J. Duffy was the first to amputate at the hip-joint for the condition which has been described. This operation was performed at the Philadelphia Hospital about 1840, and the patient recovered.

DR. WILLIAM G. PORTER then asked the opinion of the Academy on the treatment of gangrenous hernia. A week ago a woman was admitted to the Philadelphia Hospital with a hernia which had been strangulated four

[1] The patient recovered.

days. On opening the sac, Dr. Porter found a mass of gangrenous omentum and two or three inches of gangrenous bowel. He relieved the stricture, and allowed the bowel to remain in the wound. He deliberated some time as to the best course to pursue, whether to perform excision of the bowel, doing the old-fashioned operation with the Lembert suture, or to do the modern operation of lateral anastomosis, or to allow the formation of an artificial anus, to be followed later by an operation for its closure.

It seemed to him that we do not know what is exactly the best procedure in these cases. Each case must, of course, be studied by itself. After a patient has suffered with an unrelieved hernia for four days, she is not in a condition to stand any prolonged operation. He had recently come across the report of three cases, in which the primary operation was done with success. His experience with these cases has been unsatisfactory. The case just referred to lived nearly a week. Another, that of a boy with strangulation for several days, lived twenty-four hours. In still another case there was gangrene of a large portion of the omentum, but simply a small perforation in the bowel. This he pinched up, placed a ligature around and returned to the abdomen. There was one passage from the wound, and after that there was no further trouble. He had seen three or four cases in which there were gangrene, perforation, and fæcal extravasation. All these cases died.

DR. MORTON said that a patient with gangrenous hernia is generally so exhausted that any operation of magnitude, such as laparotomy, would be impracticable, and we have to be content with removing the gangrenous portion of the bowel, and then making an artificial anus.

DR. MEARS thought this question one of great importance, and, as Dr. Porter had said, each case must be judged on its individual merits. The question had been fully discussed at the last meeting of the American Surgical Association, and there were various and diverse opinions expressed. There seemed to be no definite decision reached.

DR. PORTER said that some time ago he was called to the hospital to see a woman who had a hernia strangulated for about a week. It was a large, right inguinal hernia. The Resident had had no trouble in restoring it by taxis, without ether. The stercoraceous vomiting, however, continued, and diarrhœa set in at the same time. This was a combination he had never seen before. After consultation with two of his colleagues, he concluded that it was right to give her the chance that laparotomy would afford. He made a median incision, and explored all the hernial openings. There was no peritonitis, no evidence of rupture, and no signs of intussusception. The woman's condition was so critical as not to warrant turning the intestines out and examining them systematically. The operation was completed, and the woman died shortly afterward. At the post-mortem there were found adhesions between three coils of intestine, which had kept up the strangulation. With the exception of these adhesions, the bowels were in good condition.

CORRESPONDENCE.

ST. LOUIS.

To the Editor of THE MEDICAL NEWS,

SIR: Our St. Louis Medical Society, like most similar organizations, has had many variations as to the interest of its meetings and the value of its discussions. At times there have been stormy scenes, when it seemed more like a meeting of ward politicians, and when the discussions were characterized by uncomplimentary personalities that were utterly unworthy of a company of scientific gentlemen assembled in the interest of a profession which they all claimed to love. At other times, the work done there has been such as would reflect credit upon any society. At all times its offices of honor have been much prized and eagerly sought

A year ago there was a great disturbance at the annual election; charges of illegal voting being freely made on both sides, and two sets of officers claiming that they were the choice of the Society. It resulted in a temporary split of the Society, two meetings being held at different places by the two factions for several successive weeks. At length, however, the smaller division voted that in the interest of harmony in the profession they would discontinue their separate meetings. Some returned and took part again in the regular meetings of the old Society, while others united with a number of physicians, not members of the Society, in the organization of the St. Louis Academy of Medicine.

On December 28, 1889, the annual meeting of the old Society took place. After a brief address by the retiring president, the reports of the various officers were read. It appeared from the report of the secretary that the average attendance at the weekly meetings during the year was over forty.

Before the meeting, it had been currently reported that there would be great excitement over the election of president, inasmuch as it was asserted that four specialists on insanity and nervous diseases were aspirants for the office. As a matter of fact, when the ballot was taken, without nominations being made, three of these gentlemen had large votes, but none of them had a majority. On a second ballot, however, Dr. J. K. Baudry secured 42 of the 83 ballots cast, and was thereupon declared elected. The other officers were: Dr. F. D. Mooney, Vice-President; Dr. Garland Hunt, Treasurer; Dr. W. Blickhahn, Recording Secretary; and Dr. E. S. Smith, Corresponding Secretary. Following the meeting a large number of the members adjourned to the supper-room of one of the most popular restaurants, where a banquet was spread, to which full justice was done by all. Later, toasts were drunk and responses made, and it was a late, or rather very early hour, when the festivities terminated.

Nearly all, or perhaps all, of our large cities, and many of the smaller, have, in more or less successful and efficient operation, training schools for nurses. We have one here, which has done admirable work in connection with the City Hospital. The course of instruction lasts during two years. Those in charge have been most painstaking and conscientious in their work, and very careful and exacting in their requirements, so that the physicians of the city have learned that the diploma of the Training School for Nurses is a full guarantee of ability and reliability.

Without disparaging in the slightest degree the support given by others, it is only just to say that in large measure the success of this institution is due to the indomitable energy and wise tact of the president of the Ladies Board of Managers, Mrs. W. H. Pulsifer, herself a thoroughly experienced and cultivated physician. A large and suitable building has been erected at a convenient distance from the City Hospital, which is occupied as a "Nurses' Home," all the pupil nurses having their rooms therein, as well as some of the graduates.

Last summer, the officers and staff of St. Luke's Hospital organized another training school in connection with that institution. They have a special building adjoining the hospital for the residence of the pupil nurses, and propose to send out their nurses with diplomas after one year's service in the hospital, during which they will receive lectures from the staff, and clinical instruction in the wards and private rooms of the hospital.

I understand that a third training school is to be established in connection with the Protestant Hospital. Of this I will give further details in a future letter.

Among the items of journalistic interest, I may mention that with the January issue the *St. Louis Polyclinic* assumes the title of the *St. Louis Courier of Medicine*, the publication of which was discontinued a year ago, as mentioned in a former letter. The faculty of the Post-Graduate School of Medicine have disposed of their interest in *The Polyclinic* to Dr. L. A. Turnbull, who edited it for them, and he having secured the coöperation of some of those formerly identified with the *Courier*, takes that name in preference to the other.

NEW YORK.

To the Editor of THE MEDICAL NEWS,

SIR: At this season of the year our medical societies generally experience an increase in activity, and the members filled with good resolutions for the new year, and perhaps urged on by the enthusiasm of newly elected officers, are wont to bring forward an array of peculiarly interesting papers. The County Medical Association enters upon another year's work under very auspicious circumstances, having an active membership of four hundred and thirty, which is an increase during the past twelve months of seventy per cent.

A practical paper on "The Treatment of Typhoid Fever," read before the Academy of Medicine the other evening, by Dr. W. H. Thomson, brought out a very instructive discussion. In the cases which formed the basis of his paper, the eruption was chiefly conspicuous by its absence; diarrhœa was unimportant; and some of the cases were even marked by obstinate constipation. He did not confine himself to any one method of treatment; but when the fever was excessive, employed baths, according to the method of Liebermeister; when tympanites required attention, administered the resin of turpentine; and for the diarrhœa and gastric disturbances, made use of large doses of the subcarbonate of bismuth. The patient was fed on milk and lime-water, and digestion aided by giving saccharated pepsin, usually in conjunction with dilute hydrochloric acid. This milk diet was well tolerated in most instances, and it was rarely necessary to resort to opiates for the control of diarrhœa; and he attributed this to the excellent antiseptic properties of lime-water. He denounced all the antipyretics of the coal-tar series, including quinine, as highly dangerous on account of their depressing action on the heart.

Dr. E. G. Janeway was inclined to be sceptical in regard to statistics bearing upon the treatment of this disease, because he had seen many cases abort. He sounded a note of warning against the use of strophanthus, for it had proved a delusion and a snare. In some cases it had produced a very exhausting diarrhœa, which ceased on discontinuing the drug, and returned when the medicine was resumed. Independently of this disagreeable feature, it was not the weapon for one to use in fighting so serious a disease; for its preparations were very uncertain, so much so, that he had known of a half drachm of the tincture having been taken without any appreciable effect.

Dr. A. Jacobi had noticed this dangerous peculiarity of strophanthus, and had found that even the preparations furnished by Merck and Squibb were widely different. He did not doubt the frequency of the abortive form of typhoid among children, but he considered it very uncommon among adults.

Dr. S. Baruch, the champion of Brandt's cold bath treatment of typhoid fever, again urged a more general recognition of the advantages of this method. When the temperature reaches 104° the patient should be immersed in a bath at 65°, and kept there for fifteen minutes; and this bath is to be repeated every three hours until the fever keeps within more moderate limits.

While bringing forward this method of treatment with great earnestness and candor, Dr. Baruch does not tell us what is to be done with patients whose vitality is at so low an ebb that they cannot react after this vigorous treatment.

As is usual, the question of diet brought out various opinions, most of those present resuming solid food very cautiously, and only when the patient was well along on the road toward convalescence. Dr. G. L. Peabody took pity on the poor fever-worn sufferer, and even before his temperature had quite reached normal, if he were very hungry, allowed him a very little chop or beefsteak once a day. He had made this innovation with some trepidation, but had seen no bad results from it; and it was not unreasonable to suppose that the intestines were relieved of considerable work, as this food produces much less refuse matter than an exclusive milk diet. As regards stimulants, he prefers "the wine of America"—whiskey.

This is an age of iconoclasm in medicine, and our cherished household gods must go; and so it is not surprising to hear that not only must the old-fashioned beef-tea be banished from the sick chamber, but even that made from Liebig's extract can no longer hold a place in the confidence of good orthodox physicians; for, Dr A. H. Smith tells us it is "about the most homœopathi diet imaginable."

In these days of sneezing and aching bones, it is but natural that those of us who are well enough to be around, should turn our steps toward the Academy of Medicine to listen to a paper on "La Grippe." Never was an audience better prepared to discuss the subject from the standpoint of personal experience. This time the speaker was one of our energetic medical women—Dr. Louise Fiske Bryson—who gave a sketch of various epidemics of influenza which had visited different parts of the

world, and stated that just one hundred years ago this country had been favored by a similar visitation. She called attention to the fact that although the total number of deaths must be large, on account of the great number of persons affected, the mortality was only two per cent. No locality was exempt from it; for it visited mountains as well as valleys, and even those in mid-ocean did not escape it. It was not infectious, but there could be no question about its being contagious. The symptoms were about the same in every epidemic, and the treatment consisted usually in the administration or calomel or some other cathartic, along with quinine and antipyrin. She thought that these epidemics of influenza were due to peculiar atmospheric conditions, and certainly the remarkable weather of this season impressed the hearers with the soundness of this theory. Although it has been announced that a special bacillus has been found in connection with this epidemic, we are not likely to derive much benefit from this discovery, for the influenza is rapidly on the wane. Dr. Bryson gave this advice to those who are attacked by "la grippe:" "The use of alcohol is forbidden. Go to bed, and stay there for five days; eat light food; use foot-baths; and let there be quiet of mind and body, together with an entire absence of friends, save those who are in immediate attendance upon you." Judging from some cases which have been ushered in by sudden and very acute symptoms, which passed away almost as quickly as they came, the advice "to stay in bed for five days," is certainly somewhat dogmatic.

In connection with the subject of the influenza, it is amusing to note the varying capacity for work displayed by individual physicians. One well-known medical gentleman triumphantly announced that during the height of the epidemic, he saw in one day no less than eighty patients; another physician said that forty-four had wanted him, but that it was "a physical impossibility to see them all;" while a third complained that he had been completely exhausted in attending to twenty-six patients.

CINCINNATI.

To the Editor of THE MEDICAL NEWS,

SIR: Dr. C. D. Palmer, of this city, has been made the victim of a malpractice suit for the sum of $10,000. The charge is that he negligently permitted a fragment of a large needle to remain in a patient upon whom he had performed perineorrhaphy. Dr. Palmer admits that he permitted the fragment of needle to remain as alleged, but denies that it was through negligence.

The facts in the case are about as follows: In April, 1888, the defendant performed perineorrhaphy upon the woman who now makes the complaint. At the close of the operation, he discovered that the extremity of his needle had been broken. He could not well determine whether the fragment had remained in the soft parts of the patient or had fallen to the floor. As the patient was then in a much prostrated condition from anæsthesia, he did not deem it prudent to prolong the operation for the purpose of search. As the fragment was not found after the operation, he feared that it had been retained, and for some time interrogated the patient for symptoms of its presence, and made such examination as the recently united parts would justify. Before, however, a proper time came for the thorough examination, Dr. Palmer met with a serious accident, being thrown from his carriage and so severely injured that, for months, his life was despaired of, and for more than a year he was prevented from resuming the practice of his profession.

In the meantime, the woman began to suffer severe pelvic pains. Having no suspicion of the possible presence of a foreign body, she fancied that her pain was due to ovarian disease, and applied to Drs. W. H. Wenning and George E. Jones, of the St. Mary's Hospital, to have the fashionable operation of oöphorectomy performed. The ovaries were found free from disease, and it was decided to repair the perineum still further, and it was while making the denudation that the operator discovered the fragment of needle, about an inch in length, and removed it. Its removal was followed by complete, although not immediate, relief.

Dr. Palmer is a leading specialist of our city. He is Professor of Diseases of Women in the Medical College of Ohio, Gynecologist to the Cincinnati and Good Samaritan Hospitals, and an Ex-President of the Cincinnati Academy of Medicine. His opinion is always expressed in clear and decisive language, and is always regarded as authoritative. The misfortune could not, therefore, have fallen upon one more unlikely to be guilty of the charge. The fact that he permitted the needle to remain in the tissues until the time of his injury is, in the eyes of the local profession, sufficient evidence that this was the proper course to pursue, and no one doubts that had he been permitted to continue his treatment of the case, it would have been conducted to complete recovery at a proper time.

Of course a case of this character could not occur without exciting much unfavorable comment, particularly against the surgeons who performed the second operation. Some individuals go so far as to accuse them of wilfully inciting the prosecution. There is, however, no ground for such accusation. Had it not been for the presence of a special nurse employed by the patient, and not connected with the hospital, the fact that a foreign body had been removed would probably never have been known outside the operating room, and the emphatic assertion of the gentlemen who performed this operation that they made no comment upon the discovery of the needle-point is, in a measure, corroborated by the fact that fully six months elapsed before litigation was decided upon.

The affair is an exceedingly unfortunate one throughout, and one which, if reports be true, is now regretted as well by the party bringing the suit as by all those who are involuntarily brought into it.

A very unhappy and unfortunate episode occurred last Thursday, which promises to add vigor to the proceedings against Dr. Palmer. In the *Lancet-Clinic* of Jan. 25th, the Editor, in referring to the case, took occasion to condemn the attorneys connected with it in language which is, perhaps, more vehement than judicious. He denounced the proceedings as the most "contemptible, villanous attempt at blackmail" of which he had heard, saying, also, "Our ardent hope and wish is that the doctor will at once take measures to turn the tables on these legal buzzards who, for a possible contingent fee, would attempt to rob him, and who, by their acts, have tried to bring a highly honored and honorable practitioner of the medical profession into contumely and con-

tempt. Out upon such villains, unworthy members of a dignified profession!"

The attorneys against whom this charge was made are young but prominent members of the Bar, and have heretofore borne a reputation for honest dealing; they doubtless took charge of the case in good faith and without thought of blackmail. So incensed were they, however, at this charge, that they promptly repaired to the office of the *Lancet-Clinic* and proceeded to make a most cowardly attack upon the Editor, Dr. J. C. Culbertson, whom they found alone and unprotected. But the worthy editor proved more of a pugilist than they anticipated, for he disarmed one of them of his weapon —a raw-hide—pommelled him over the head with it, and forcibly ejected him. His other assailant was in the meantime waited upon by the robust foreman of the printing office, who had been attracted by the uproar. A warrant was promptly sworn out by Dr. Culbertson, and the two attorneys were placed under arrest.

VIENNA.

To the Editor of THE MEDICAL NEWS,

SIR: Just now the influenza monopolizes the attention of the Vienna medical world. Everybody has had it, the hospitals are filled with its victims; of the American colony eighty per cent. were sick, or are so now—the royal family, the professors and students succumbed; so many of the latter that lectures were suspended.

The grandest man in the faculty here is undoubtedly Billroth, the surgeon. He is tall and well built though slightly stooping, has a fine head, with a large aquiline nose and clear eyes, with rather heavy eyelids. Scanty white hair makes his forehead seem very high, and a great flowing white beard conceals the lower half of his face. He speaks in a rather low tone, but every sentence is clearly cut. On the first of May, 1889, he celebrated his sixtieth birthday, and received a grand ovation from the city as one of its most honored citizens.

His clinic room is small, seating about 250 students very uncomfortably. The operating space is 15 x 25 feet and rectangular; in it are two tables, for the number of patients is so great that often while Billroth operates at one table the assistants work at a minor case at the other. Laparotomies are of daily occurrence, and on one morning I saw an echinococcus of the liver removed, a strangulated hernia liberated, a uterine fibroid excised by the Briesky method, and an ovarian cyst taken out.

Dr. Zeman, the great favorite of Americans in Vienna, who has given most excellent courses in gross pathology to classes made up of foreigners only, leaves his position as first assistant to the chair of pathology in March. He will take charge of two suburban hospitals.

The clinic of Professor Nothnagel on internal medicine is also a favorite one, but the professor is now very ill from an attack of influenza complicated by pneumonia.

Although Nothnagel is one of Europe's highest authorities on brain lesions, even he makes mistakes. He recently showed a case in which all the symptoms of *meningitis suppurativa* were well marked, yet the post-mortem proved it to be a venous varix in the optic thalamus. Another case that he demonstrated as progressive paralysis, on dissection was found to be an abscess in the parieto-occipital region. In the case of venous varix Nothnagel stood at the post-mortem almost sure of verifying his diagnosis, but when Professor Kundrat removed the calvarium and everything looked normal, Nothnagel was greatly surprised. On the next day he gave a brilliant lecture on the uncertainty of diagnosis.

In the treatment of pleuritis they are very partial here to dry cups. In Nothnagel's clinic the cups are placed over the seat of the disease early in the case, and they greatly diminish the pain and make healing more easy. For large effusions, that are known to be serous, the "Thirst Treatment" has found considerable favor. The patient gets nothing but dry food, dried bread, smoked meat, etc,, so that he receives as little water as possible. He become very thirsty at first, but soon becomes somewhat accustomed to the diet. On the first day his urine is quite scanty, but on the third or fourth it increases and the exudation in the pleural cavity grows rapidly less, all the tissues yielding their moisture, but those in a pathological state yielding up the greater portion.

That rare disease, *actinomycosis*, is quite common in Professor Albert's surgical clinic, for in the past four months he has shown more than a dozen cases. In most of them it was localized as an abscess on the lower jaw, but in one case there were several large abscesses in the liver, there had been perforation into the lung and large quantities of pus were expectorated. The spleen was also involved and the patient finally died of peritonitis. The lumbar vertebræ were filled with little nests of the germ, and there was no healthy organ in the body except the heart. The diagnosis is easy, for in the pus from an actinomycotic abscess, hard granules as large as a grain of sand and greenish in color can be found; on microscopic examination they present "the appearance of a wheel with from twenty to forty spokes." The treatment must be heroic, for after the alimentary canal has been infected the prognosis is fatal. In every case of suspicious abscess the pus is examined carefully for the germ.

Three excellent docents were promoted to professorships at Christmas time—Professors Lorenz, Maydl, and Fritsch. Lorenz has long been an authority on orthopædic surgery, Maydl is the surgeon of the Policlinic and a most skilful operator, while Fritsch is less well known. Lorenz and Maydl are both former assistants of Professor Albert.

There are about a hundred American physicians in Vienna at the present time and several homœopaths. Many courses in gynecology, surgery, and ophthalmology are given in English for their special benefit, and most of the docents and assistants speak English. Foreigners work principally with the docents and assistants, as these may give practical courses for advanced men, while the professors have time for nothing but the regular lectures for students. Thus we get into the wards and examine the patients in their beds, while the Austrian student rarely comes to the bedside. For this instruction and practice we pay about forty cents an hour, although we always have another hour before the docent comes in, to examine and thoroughly study the cases.

There is so much pneumonia prevalent here now, and so much pleuritis that differential diagnosis is at times almost impossible, and the professors are now investigating the value of urinary analysis in the differentiation. They place considerable importance upon the amount of chlorides in the urine, and in many cases make the

diagnosis depend almost wholly on the nitrate of silver reaction.

Professor Kaposi, the dermatologist, still adheres to the theory that lupus is non-tuberculous. He spends an hour each term trying to prove that the bacilli found in lupus get there accidentally, and that they are rarely found. He undoubtedly has remarkable success in the treatment of lupus, for he removes each little nodule by a sharp spoon, and though he does not believe it tuberculous he treats it as though it were. He shows twenty or thirty cases of *lupus vulgaris* every week. He also has a case of leprosy which has been in the hospital for many years, mingling with all the patients, and this certainly proves that the dread disease is non-contagious, for no other case has been discovered here in all that time. This poor man is indeed an awful sight; his eyes are gone, his fingers are mere stumps, his face looks like that of a corpse which has been in the water for a week, and all his movements are slow and trembling. Great numbers of scabies cases are treated here, and Kaposi's favorite prescription gives excellent results:

℞.—Adeps	. . . .	100 parts.
Sapon. virid.	. . . .	50 "
Naphthol	. . . .	15 "
Cretæ alb. pulv.	. . . .	10 "

Apply very thoroughly over the entire affected area, and rub it over the rest of the body also. One application generally suffices and no bath is necessary as preliminary treatment. The patient is not washed for a week, and at the end of that time a cure is almost certain.

NEWS ITEMS.

The Mott Memorial Library.—From a circular sent out by the Secretary of the New York State Medical Association, we learn that the Society has joined interests with the Mott Memorial Library. The coalition brings together about 13,000 volumes at No. 64 Madison Avenue, a locality that will be convenient for the seven hundred members of the Association, when in New York City. An effort will be made to secure the services of a librarian as soon as possible, in the belief that in proportion as the books already owned can be utilized, there will be a constant and growing flow of volumes to the Library.

Surgery on a Sick-bed.—Dr. Hulse, of Bay Shore, Long Island, is reported to have performed a surgical operation on a patient while himself sick in bed. The incident, as described by the injured patient, shows that men of heroic mould are not wanting. A young man shattered his left hand by the accidental explosion of a shotgun. He was temporarily cared for at a life-saving station, and then conveyed across the bay to Bay Shore, and to the house of Dr. Hulse, who was at the time suffering from pneumonia and confined to his bed. Messages were sent out to the other physicians of the neighborhood, but none of them could be secured for the immediate treatment of the wounded man. The wound was judged by Dr. Hulse to demand an amputation of the hand without delay. He accordingly directed that the patient be placed across the bed on which he himself lay, and, being bolstered up with pillows, proceeded to amputate the hand and dress the wound. The sick physician was suffering acutely during the operation.

New Appointment.—Dr. Frank Ferguson, Pathologist to the New York Hospital, has been elected Professor of Pathology in the New York Post-Graduate Medical School and Hospital.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM FEBRUARY 11 TO FEBRUARY 17, 1890.

SMITH, JOSEPH R., *Lieutenant-Colonel and Surgeon.*—Is granted leave of absence for twenty days, to take effect about February 10th.—Par. 1, *S. O. 15, Headquarters Department of Arizona*, February 8, 1890.

By direction of the President, LOUIS W. CRAMPTON, *Captain and Assistant Surgeon*, is detailed as a member of the Army Retiring Board at Chicago, Ill., convened by War Department Order dated November 18, 1889, published in S. O. 269, A. G. O., November 18, 1889, from Headquarters of the Army, vice Henry McElderry, Major and Surgeon, hereby relieved.—Par. 9, *S. O. 36, A. G. O.*, February 12, 1890.

By direction of the Secretary of War, the retirement from active service, on February 9, 1890, by operation of law, of ANDREW K. SMITH, *Colonel and Surgeon*, under the provisions of the Act of Congress approved June 30, 1882, is announced. Colonel Smith will proceed to his home.—Par. 1, *S. O. 34, A. G. O., Washington, D. C.*, February 10, 1890.

By direction of the Secretary of War, leave of absence for two months is granted HENRY R. TILTON, *Major and Surgeon*, to take effect upon his being relieved from duty at the U. S. Military Academy, West Point, New York.—Par. 6, *S. O. 34, A. G. O., Washington, D. C.*, February 10, 1890.

By direction of the Secretary of War, the extension of leave of absence on surgeon's certificate of disability, granted LEONARD Y. LORING, *Major and Surgeon*, in S. O. 268, November 16, 1889, from this office, is still further extended two months, on surgeon's certificate of disability.—Par. 7, *S. O. 34, A. G. O., Washington, D. C.*, February 10, 1890.

By direction of the Secretary of War, CHARLES R. FLETCHER, *Lieutenant-Colonel and Surgeon*, is relieved from duty as Examiner of Recruits in New York City, and will report to the commanding general Division of the Atlantic, for duty as Attending Surgeon in that city.—Par. 1, *S. O. 33, A. G. O., Washington*, February 8, 1890.

By direction of the Secretary of War, HENRY MCELDERRY, *Major and Surgeon*, is relieved from duty at Fort Wayne, Michigan, and will report to the Superintendent of the U. S. Military Academy, West Point, New York, for duty as Post Surgeon, relieving Henry R. Tilton, Major and Surgeon, who, being thus relieved, will report in person to the commanding officer, Fort Wayne, Michigan, for duty at that station.—Par. 13, *S. O. 33, A. G. O., Washington, D. C.*, February 8, 1890.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF THE MEDICAL CORPS OF THE U. S. NAVY, FOR THE WEEK ENDING FEBRUARY 15, 1890.

BATES, N. L., *Medical Director.*—Ordered to the Naval Hospital, Mare Island, California.

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked. Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS *should be addressed to No. 1004 Walnut Street, Philadelphia.*